I CALL TO ORDER

II ROLL CALL – Directors Rick Brown, Jerry Crippen, Mary Jane Griego, Dan Logue, Richard Webb

III PUBLIC COMMUNICATIONS: Any person may speak about any subject of concern provided it is within the jurisdiction of the Levee Improvement Authority and is not already on today’s agenda. The total amount of time allotted for receiving such public communication shall be limited to a total of 15 minutes and each individual or group will be limited to no more than 5 minutes.

IV CONSENT AGENDA: All matters listed under the Consent Agenda are considered to be routine and can be enacted in one motion.

   A. Approve minutes of the regular meeting of October 2, 2007.

V ACTION ITEMS

   A. Approve fourth amendment to agreement with HDR Engineering, Inc. in the amount of $280,000 for engineering and construction management services for Phase 4 Upper Yuba River and Phase 2 construction management and authorize the Chairman to execute upon review and approval of Counsel.

   B. Approve fourth amendment to agreement with PBS & J Inc. in the amount of $385,810 for environmental consulting services and authorize the Chairman to execute upon review and approval of Counsel.

   C. Receive report of Displaced Persons Relocation Appeals Board regarding APN 016-150-017 (David and Pam Foster); hear further appeal from David and Pam Foster; and take action as appropriate. (No background material)

VI BOARD AND STAFF MEMBERS’ REPORTS

VII ADJOURN
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY

MINUTES – BOARD OF DIRECTORS

OCTOBER 2, 2007

A meeting of the Board of Directors of the Three Rivers Levee Improvement Authority was held on the above date, commencing at 3:32 p.m., within the Government Center, Marysville, California, with a quorum being present as follows: Directors Rick Brown, Jerry Crippen, Mary Jane Griego, Dan Logue and Richard Webb. Also present were Assistant County Administrator Randy Margo, Program Manager Ric Reinhardt, Co-Counsel Andrea Clark, and Clerk of the Board of Supervisors/Secretary Donna Stottlemeyer. Chairman Webb presided.

PUBLIC COMMUNICATIONS

No one came forward.

CONSENT AGENDA

Upon motion of Director Griego, seconded by Director Logue, and unanimously carried, the Board took the following actions:

1) Minutes: Approved minutes of the regular meeting of September 18, 2007, as written.


ACTION ITEMS

Chairman Webb left the meeting at 3:35 p.m. and Vice-chairman Logue presided.

Second Funding Agreement and Financial Plan for Proposition 1E Grant: Assistant County Administrator Randy Margo and Consultant Seth Wurzel, EPS Consulting Services, recapped the proposed funding agreement, financial plan, and term sheet for funding of the local share and receipt of Proposition 1E funds for Phase 4 levee improvements. Mr. Wurzel and Mr. Margo responded to Board inquiries.
Mr. Seth Merewitz, Counsel for Plumas Lake Landowners Group, responded to Board inquiries regarding participants during the open enrollment period.

Following Board discussion, Treasurer Jim Kennedy advised under the current agreement there is no guarantee from the landowners for $30 million and an agreement to move forward for Community Facilities District and Assessment District.

Upon motion of Director Crippen, seconded by Director Griego, and carried, the Board adopted Resolution No. 07-26 which is entitled: “A RESOLUTION BY THE BOARD OF THREE RIVERS LEVEE IMPROVEMENT AUTHORITY APPROVING PROPOSAL TO AMEND SECOND AGREEMENT FOR ADVANCED FUNDING AND REIMBURSEMENT OF COSTS FOR LEVEE IMPROVEMENTS, AND DIRECTING RELATED ACTIONS.”

BOARD AND STAFF MEMBERS’ REPORTS

Director Webb returned to the meeting at 4:08 p.m.

Reports were received on the following:

Co-Counsel Andrea Clark:
- Assessment and Community Facilities District formation does not require LAFCO approval

Program Manager Ric Reinhardt:
- Extension of Segment 2 bid October

ADJOURNMENT

There being no further business to come before the Three Rivers Levee Improvement Authority the meeting was adjourned at 4:15 p.m. by Chairman Webb.
TO: Three Rivers Levee Improvement Authority Board  
FROM: Paul Brunner, Executive Director  
       Ric Reinhardt, Program Manager  
SUBJECT: Consider Approval of fourth contract amendment to HDR Phase 4  
         engineering and construction management services contract

**Recommended Action**

Approve a fourth contract amendment to the basic HDR contract for engineering services  
and authorize the Chairman to sign the amendment and execute once General Counsel  
has reviewed and approved; and additional funding is available. This amendment would  
increase the contract by $280,000 for services on a time-and-expenses basis, to a  
maximum amount not exceeding $3,537,835.

**Discussion**

On December 13, 2005 TRLIA signed an original contract with HDR for Phase 4. This  
contract included Engineering and Construction Management services for Phase 4 and  
also the completion of Phase 2 work that was previously contracted to HDR. The  
originally contract has been previously modified three times: First Amendment, dated  
February 9, 2006, Second Amendment, dated March 7, 2006, and Third Amendment,  
dated August 8, 2006.

This fourth amendment to HDR’s contract is needed to cover additional work by HDR  
and their sub contractors that were not included in the original contract or previous 3  
amendments. At the time the work items below were authorized by TRLIA program  
managers it was believed the work was within the original contract scope or could be  
handled thru contingencies within the original contract or subsequent amendments.  
TRLIA staff has verified that the work has been performed and was not within the  
previous contracts.
The additional work is broken into two areas:

1. Additional construction management and design services were provided at the request of TRLIA (MBK/Handen Company, Inc.) during the construction of both the Phase 2 and Phase 4 projects: Cost $472,279.

   a. The Phase 2 CAL TRANS Maintenance Yard detention pond was re-designed per additional requirements provided by Caltrans. Without this re-design Caltrans would not allow the TRLIA contractor onsite to complete the construction of the Yuba River seepage berm.

   b. The original schedule for the Phase 2 construction was from July 2005 to November 2005. The schedule was extended through June 2007 to complete all construction. Additional inspection was requested during the winter of 2005/2006 and 2006/2007 to ensure levee stability and safety.

   c. Kleinfelder (geotechnical sub to HDR) provided additional laboratory sampling for Phase 2 levee fill materials after the borrow source was exhausted. This included sampling from the Bear River Remnant levee, and several stockpile areas off site. Additional concrete samples were taken due to the increase in size of Pump Station #6.

   d. The Phase 4 construction schedule was originally scheduled from August 2007 to November 2007. Due to a late start, TRLIA requested that construction occur 24 hours a day, 7 days a week. In order to complete this work prior to the flood season it required construction to occur 24 hours a day and 7 days a week. Work on the slurry wall was done at three different headings as opposed to two headings as originally assumed. This required the extensive use of overtime during the construction period and more personnel to oversee the work at the additional heading. Additional inspection was performed by HDR throughout the winter of 2006/2007 as directed by TRLIA. Kleinfelder (soils sub to HDR) provided additional inspectors for the night shift of the Phase 4 Yuba River slurry cutoff wall.

2. As part of the levee certification process the USACE requested additional work to be accomplished as the levees were being improved and then later during their certification evaluation. All the items listed below were not included in the original HDR contract or subsequent amendments. Cost $142134.

   a. Design of additional Phase 2 seepage berms along the landside toe of the Bear River on both sides of Highway 70.

   b. A Phase 2 monitoring well was designed at the Western Pacific Interceptor Canal for observation of a potential boil on the landside of the levee.
c. Two Phase 2 monitoring wells were designed in the seepage berm along the Yuba River between the levee and the railroad tracks to monitor performance of the seepage berm.

d. Six additional monitoring wells were designed for installation along the Yuba River Phase 4 slurry wall.

e. Additional permeability samples were taken from the slurry wall placed in Phase 4 Yuba River levee per Corps changes to the specifications after bid.

f. Additional permeability samples were taken from the 2 slurry walls placed in the Phase 2 Western Pacific Interceptor Canal (WPIC) per Corps changes to the specifications after bid.

g. When certification of the TRLIA levee improvements was requested from the Corps of Engineers, they informed TRLIA that a construction report would have to be prepared. This report would document facility improvements and construction issues and present an extensive statistical analysis of the quality control (QC) and quality assurance (QA) testing accomplished during construction. This report requirement was not anticipated and was never in HDR's scope of work. The effort to prepare this report was placed on a fast track and resulted in a large document that included a complete description of the construction accomplished for Phases 1, 2 and Yuba Phase 4, the as-built construction drawings, several technical memorandum addressing different construction issues, and the extensive QC and QA statistical analysis. This report was critical in obtaining the levee certification from the Corps of Engineers.

TRLIA’s current contract with HDR contains design services for the remainder of the Yuba south levee upstream of Simpson Lane. This design effort has been suspended while TRLIA coordinates with the Corps of Engineers to verify the correct water surface elevations to use for design in this reach. To minimize the amount of increase of this amendment, HDR has modified their contract to delete these final Yuba design efforts. Once the water surface elevations for this reach have been agreed upon between TRLIA and the Corps, TRLIA and HDR will re-scope the design effort and budget to complete the remainder of the Yuba reach. Current contract budget will be used to cover much of the out of scope efforts described above. However a current amendment amount of $280,000 is required to cover efforts above the current contract budget.

**Fiscal Impact**

This amendment would increase the contract by $280,000 for services on a time-and-expenses basis, to a maximum amount not exceeding $3,537,835. TRLIA currently does not have funding to pay for these services until additional funding (e.g. Proposition 13 reimbursements) are available. The Prop 13 reimbursements are anticipated to occur by November 2007.
FOURTH AMENDMENT
TO
AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY
AND
HDR ENGINEERING, INC.

THIS FOURTH AMENDATORY AGREEMENT is made and entered into this ___ day of October 2007, by and between the Three Rivers Levee Improvement Authority, ("TRLIA"), a California Joint Powers Authority, and

HDR Engineering, Inc.
"CONSULTANT"

WHEREAS, TRLIA and CONSULTANT entered into an agreement on December 13, 2005 to provide professional services for Engineering Design and Environmental Studies for Phase 4 Levee Repairs - Upper Yuba River, Continuation of Phase 2 Construction Management (2006), and FEMA Certification of Contract Work ("Agreement");

WHEREAS, a FIRST AMENDATORY AGREEMENT, executed February 14, 2006, increased the maximum not to exceed contract fee from $2,580,038 by $118,955 to $2,698,993; and

WHEREAS, a SECOND AMENDATORY AGREEMENT, executed March 7, 2006, increased the maximum not to exceed contract fee from $2,698,993 by $117,649 to $2,816,642; and

WHEREAS, a THIRD AMENDATORY AGREEMENT, executed August 8, 2006, increased the maximum not to exceed contract fee from $2,816,642 by $661,193 to $3,537,835; and

WHEREAS, TRLIA and CONSULTANT desire to amend Agreement;

NOW, THEREFORE, TRLIA and CONSULTANT agree as follows:

1. Exhibit A of AGREEMENT shall be amended to perform those additional services as described in Exhibit A to this FOURTH AMENDMENT.

2. Attachment B, Provision B.1 of the Agreement shall be revised to increase the maximum not to exceed contract fee by $280,000 from $3,537,835 to $3,817,835.
All other terms and conditions contained in AGREEMENT shall remain in full force and effect.

This Amended agreement is hereby executed on this ____ day of October, 2007.

“TRLIA”

________________________
Chairman

“CONSULTANT”

________________________
Randy P. Olsen
Vice President

ATTEST:
DONNA STOTTLEMEYER
CLERK OF THE BOARD

________________________

APPROVED AS TO FORM:

________________________
SCOTT L. SHAPIRO
GENERAL COUNSEL
Revised Scope of Work  
(Amendment No. 4)

Phase 4 Levee Repairs – Upper Yuba River,  
Continuation of Phase 2 Construction Management (2006),  
and FEMA Certification of Contract Work

September 27, 2006

Three Rivers Levee Improvement Authority  
Marysville, California

HDR

2365 Iron Point Road, Suite 300  
Folsom, CA. 95630

EXHIBIT "A"
# TABLE OF CONTENTS

**PROJECT OVERVIEW** ................................................................................................................................. 1

Task 1. Project Management ......................................................................................................................... 4

1. Project Management ................................................................................................................................. 4
2. Project Guide ............................................................................................................................................. 4
3. Project Kick-Off Meeting .......................................................................................................................... 4
4. Monthly Status Meetings .......................................................................................................................... 4
5. Monthly Progress Reports .......................................................................................................................... 5
6. Quality Control ......................................................................................................................................... 5
7. Agency Coordination ................................................................................................................................. 5

Task 2. Yuba River Levee Pre-design ........................................................................................................... 7

PART 1 - SPRR TO Simpson Lane ............................................................................................................... 7

1. Basis of Design Report .............................................................................................................................. 7
2. Geotechnical Effort for Basis of Design (Parts 1 and 2) ........................................................................... 7
3. Submit Draft Basis of Design Report ......................................................................................................... 8
4. TRLA and Agency Review ......................................................................................................................... 8
5. Check Point Meeting ................................................................................................................................. 8
6. Finalize Basis of Design Report ................................................................................................................ 8

PART 2 - REMAINING YUBA LEVEE REPAIRS ....................................................................................... 9

8. Submit Draft Basis of Design Report ......................................................................................................... 9
9. TRLA and Agency Review ......................................................................................................................... 9
10. Check Point Meeting ............................................................................................................................... 10
11. Finalize Basis of Design Report ............................................................................................................. 10

Task 3. Environmental Compliance and Permits ....................................................................................... 11

1. CEQA Phase I. Initial Study ....................................................................................................................... 12

1.1. Prepare Project Description .................................................................................................................. 12
1.2. Prepare Administrative Draft Initial Study ............................................................................................ 12
2.2. Prepare Initial Study ................................................................................................................................ 12
3. CEQA Phase II. Negative Declaration ..................................................................................................... 12

2.1. Prepare Administrative Draft Mitigated Negative Declaration .............................................................. 13
2.2. Prepare Mitigated Negative Declaration ............................................................................................... 13
3.2.1. Review Comments ............................................................................................................................. 13
3.2.2. Prepare Mitigation Reporting and Monitoring Plan ........................................................................... 13
3.2.3. Attend Public Hearing ....................................................................................................................... 13
3.3. Public Outreach ...................................................................................................................................... 13
3.4. Permitting ............................................................................................................................................... 14

3.4.1. Conduct Biological Field Studies ....................................................................................................... 14
3.4.2. Prepare Wetland Delineation Report .................................................................................................. 15
3.4.3. Attend Informal Consultation Meetings with CDFG, USFWS and NOAA-Fisheries ......................... 15
3.4.4. Prepare BA and Attend 2 Formal Consultation Meetings with CDFG, USFWS, and NOAA-Fisheries ........................................................................................................................................... 15

3.4.5. Prepare CWA 404 Permit Application ............................................................................................... 15
3.4.6. Prepare CWA 401 Certification Application ...................................................................................... 15
3.4.7. Prepare Streambed Alteration Agreement Application ...................................................................... 16
3.5. Reclamation Board Encroachment Permit for Yuba River Levee Repairs ............................................ 16
3.6. Other Permits .......................................................................................................................................... 16

Task 4. Plans, Specifications and Estimates (PS&E) ............................................................................... 17

PART 1 - SPRR TO SIMPSON LANE ........................................................................................................... 17

4.1. 30 Percent PS&E ........................................................................................................................................ 17

4.1.1. Drawings ............................................................................................................................................. 17
4.1.2. Technical Specifications ...................................................................................................................... 17
4.1.3. Engineer's Report ............................................................................................................................... 17
TABLE OF CONTENTS

4.1.4. Cost Estimate ............................................................................................................. 18
4.1.5. Quality Control ........................................................................................................ 18
4.1.6. Submit 30 Percent PS&E ....................................................................................... 18
4.1.7. 30 Percent TRLIA and Agency Review ................................................................... 18
4.2. 90 Percent PS&E .......................................................................................................... 19
  4.2.1. Drawings .................................................................................................................. 19
  4.2.2. Specifications .......................................................................................................... 20
  4.2.3. Engineer's Report ................................................................................................... 20
  4.2.4. Estimate of Probable Construction Costs ............................................................. 20
  4.2.5. Quality Control ...................................................................................................... 20
  4.2.6. Submit 90 Percent PS&E ....................................................................................... 20
  4.2.7. 90 Percent TRLIA and Agency Review .................................................................. 20
4.3. Final PS&E .................................................................................................................... 20
  4.3.1. Final Drawings ....................................................................................................... 21
  4.3.2. Final Specifications ................................................................................................. 21
  4.3.3. Engineer's Report ................................................................................................... 21
  4.3.4. Estimate of Probable Construction Costs ............................................................. 21
  4.3.5. Quality Control ...................................................................................................... 21
PART 2 - REMAINING YUBA LEVEE REPAIRS ................................................................. 22
4.4. 30 Percent PS&E .......................................................................................................... 22
  4.4.1. Drawings .................................................................................................................. 22
  4.4.2. Technical Specifications ......................................................................................... 22
  4.4.3. Engineer's Report ................................................................................................... 22
  4.4.4. Cost Estimate .......................................................................................................... 22
  4.4.5. Quality Control ...................................................................................................... 22
  4.4.6. Submit 30 Percent PS&E ....................................................................................... 23
  4.4.7. 30 Percent TRLIA and Agency Review .................................................................. 23
4.5. 90 Percent PS&E .......................................................................................................... 23
  4.5.1. Drawings .................................................................................................................. 24
  4.5.2. Specifications .......................................................................................................... 24
  4.5.3. Engineer's Report ................................................................................................... 24
  4.5.4. Estimate of Probable Construction Costs ............................................................. 25
  4.5.5. Quality Control ...................................................................................................... 25
  4.5.6. Submit 90 Percent PS&E ....................................................................................... 25
  4.5.7. 90 Percent TRLIA and Agency Review .................................................................. 25
4.6. Final PS&E .................................................................................................................... 25
  4.6.1. Final Drawings ....................................................................................................... 25
  4.6.2. Final Specifications ................................................................................................. 25
  4.6.3. Engineer's Report ................................................................................................... 26
  4.6.4. Estimate of Probable Construction Costs ............................................................. 26
  4.6.5. Quality Control ...................................................................................................... 26

Task 5. Rights-Of-Way (ROW), Easement Requirements and Utilities
Coordination ......................................................................................................................... 27
PART 1 - SPRR TO SIMPSON LANE .................................................................................. 27
  5.1. Real Estate Requirements .......................................................................................... 27
  5.2. Utility Identification Coordination ............................................................................ 27
    5.2.1. Conflict Identification .......................................................................................... 27
    5.2.2. Utility Relocation Coordination .......................................................................... 28
PART 2 - REMAINING YUBA LEVEE REPAIRS ................................................................. 28
  5.3. Real Estate Requirements .......................................................................................... 28
  5.4. Utility Identification Coordination ............................................................................ 28
    5.4.1. Conflict Identification .......................................................................................... 28
    5.4.2. Utility Relocation Coordination .......................................................................... 29

Task 6. Pre-Bid Assistance and Construction Support ......................................................... 30
PART 1 - SPRR TO SIMPSON LANE .................................................................................. 30
# TABLE OF CONTENTS

6.3. Pre-Construction .......................................................... 30
6.4. Construction-Phase Services ............................................. 31
   6.4.1. Request for Information Support .................................. 31
   6.4.2. Shop Drawings and Submittal Clarification .................... 31
   6.4.3. Change Order Support .................................................. 32
   6.4.4. Field Visits and Site Meetings ...................................... 32
   6.4.5. Record Documents .......................................................... 32

PART 2 – REMAINING YUBA LEVEE REPAIRS .......................... 33
6.5. Bidding Support (Addenda and Clarifications) ................. 33
6.6. Pre-Bid Meetings ............................................................ 33
6.7. Pre-Construction Meeting ............................................... 33
6.8. Construction-Phase Services ............................................. 34
   6.8.1. Request for Information Support .................................. 34
   6.8.2. Shop Drawings and Submittal Clarification .................... 34
   6.8.3. Change Order Support .................................................. 35
   6.8.4. Field Visits and Site Meetings ...................................... 35
   6.8.5. Record Documents .......................................................... 35

Task 7. - Construction Management (Phase 2 Bear River, WPIC and Yuba River Levee Repairs in 2006) ......................................................... 37
7.1. Communications and Correspondence .................................. 37
7.2. Contract Administration .................................................... 37
7.3. Quality Assurance Inspection and Testing ............................ 38
7.4. Final Completion/Project Closeout ........................................ 39
7.5. Other Geotechnical Quality Assurance Testing and Inspection ........ 39
7.6. Environmental Monitoring During Construction .................... 40
   7.6.1. On Site Construction Support Service ............................... 41
   7.6.2. Attend Meetings and Coordinate with Project Team .............. 42
   7.6.3. Prepare Construction Monitoring Reports .......................... 42

Task 8. FEMA Certification for Contract Work ............................. 43
8.1. FEMA Certification for Contract Work ................................ 43
   8.1.1. FEMA Certification Objective ........................................ 43
   8.1.2. Development of Request for LOMR Package ...................... 44
   8.1.3. Geotechnical Support for LOMR Package .......................... 46

Task 9. – Phase 4 Construction Management (SPRR to Simpson Lane) ............... 47
9.1. Communications and Correspondence .................................. 47
9.2. Contract Administration .................................................... 47
9.3. Quality Assurance Inspection and Testing ............................ 48
9.4. Final Completion/Project Closeout ........................................ 49
9.5. Other Geotechnical Quality Assurance Testing and Inspection ........ 49
9.6. Environmental ................................................................. 50
   9.6.1. Environmental Construction Support Services ................... 50
   9.6.2. Prepare Yuba Phase IV Streambed Alteration Agreement Application .......... 52
   9.6.3. Prepare Technical Addendum for Bear River Berm Extension .................. 52
9.7. Post-Construction Check Surveys .......................................... 52
   9.7.1. Check Surveys ............................................................... 53
   9.7.2. Surveying Support .......................................................... 53

SCHEDULE FOR PERFORMANCE ........................................ 54
FEES AND PAYMENTS ......................................................... 55
PROJECT BACKGROUND AND OVERVIEW

PROJECT OVERVIEW

Engineering design and environmental services have been requested for a portion of the south Yuba River levee, which protects a portion of Reclamation District No. 784 (RD No. 784). This work has been identified as Phase 4 of the levee repair program for the Three Rivers Levee Improvement Authority (TRLIA). In addition, continued construction management services for the Phase 2 construction contract (in 2006) and FEMA certification of the contract work has been included. This work follows the levee repair work HDR (CONSULTANT) is completing for levee repairs to the Bear River, Western Pacific Interceptor Canal (WPIC) and Yuba River levees (the Phase 2 work).

The services to be provided to the TRLIA are: preliminary engineering including an alternatives analysis, preparation of a basis of design report, environmental documentation, permit application preparation and development of final construction documents (plans, specifications, design analysis and construction cost estimate). The objective of the project is to repair the project levees in order to achieve FEMA certification. This project in and of itself will not achieve FEMA certification, but is a portion of a greater scope of work required to achieve certification by others.

Note that this scope of work (Amendment No. 1) has been modified from our original contract scope (dated November 29, 2005) to accommodate TRLIA's request to accelerate a portion of the Phase 4 project and complete construction of that portion of the project in 2006. The accelerated portion of the project (referred to herein as Part 1) includes a cutoff wall constructed between the Southern Pacific Railroad (SPRR) and Simpson Lane. The remainder of the Yuba River levee repairs that have been identified between State Route 70 (SR 70) and the termination of the levee at the Goldfields (Part 2) will be completed in 2007.

Services to be provided include:

Part A - Phase 4 Levee Repairs – Upper Yuba River

- For Part 1 of the project, an Alternatives Analysis technical memorandum for the project reach was completed as part of Phase 2, which is to be reviewed with the project team and agencies and the alternative that will be carried into design will be identified. Based on this preferred alternative, prepare a Basis of Design Report. A separate Basis of Design Report will be prepared for Part 2 of the project.

- Prepare environmental compliance and permitting documents for the Yuba River levee repair project. Prepare permit applications and required supporting documents for regulatory agencies and utilities. Provide assistance to TRLIA staff in securing permits as required. Reclamation Board Encroachment permitting is also included.

- Separate design packages will be prepared for Parts 1 and 2 of the project. For each, prepare preliminary and final design plans and develop contract technical specifications. Prepare construction cost estimates of project features at the preliminary and final design submittals.
PROJECT BACKGROUND AND OVERVIEW

- Provide construction services including pre-bid assistance, field reviews, response to contractor's requests for information, and review of shop drawings. Provide as-built documentation at the end of construction.

- Coordinate with USACE and other agencies during design and construction.

Part B - Continuation of Phase 2 Construction Management (2006)

- Provide Construction Management services for the remainder of the Phase 2 levee repairs (2006 construction season).

Part C - FEMA Certification of Contract Work

- As part of the FEMA certification process, prepare an application to FEMA for a Letter of Map Revision for project work components, which will include all pertinent analyses completed for the project.

Basis of Design Reports for each element of the project, 30 Percent, 90 Percent and Final PS&E are to be reviewed by TRLIA and their consultants, the California State Department of Water Resources (DWR), and USACE. CONSULTANT will be responsible for integrating review comments and providing record of responses.

The scope of work has been divided into eight tasks outlining the design and construction process, deliverables and assumptions. Note that where task descriptions are based on assumptions, a change in the quantity of scope of the assumption will constitute justification for additional fee and/or time. Major tasks are as follows:

Part A - Phase 4 Levee Repairs – Upper Yuba River

1. Project Management

2. Yuba River Levee Pre-design

3. Environmental Compliance and Permits

4. Plans, Specifications and Estimates (PS&E)

5. Rights-Of-Way, Easement Requirements And Utilities Coordination

6. Pre-Bid Assistance and Construction Support
PROJECT BACKGROUND AND OVERVIEW

Part B - Continuation of Phase 2 Construction Management (2006)

7. Construction Management (Phase 2 Bear River, WPIC and Yuba River Levee Repairs)

Part C - FEMA Certification of Contract Work

8. FEMA Certification for Contract Work
Part A - Phase 4 Levee Repairs - Upper Yuba River

Task 1. Project Management

1.1. Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project. Meeting or exceeding stakeholder needs and expectations invariably involves balancing competing demands among:

- Scope, time, cost, and quality.
- Stakeholders with differing needs and expectations.
- Identified requirements and unidentified expectations.

HDR’s project manager will manage the scope, schedule and budget for all project activities, including the design team and subconsultants. In addition, the project manager will coordinate with the client, program manager, agencies and other stakeholders throughout the duration of the project.

Assumptions:


1.2. Project Guide

CONSULTANT will develop a Project Guide that includes objectives, organization, scope of services, schedule, budget, QA/QC program, design criteria, communications, document control, cost controls, invoicing and reporting.

Deliverables:

- Project Guide (2 copies).
- Project schedule (2 copies).

1.3. Project Kick-Off Meeting

CONSULTANT will attend a project kick off meeting with TRLIA and other interested agencies (e.g., USACE). At the meeting, the purpose, goals, timeline, design criteria, deliverables schedule and defined objectives of Scope of Services will be discussed. Consensus will be reached on the technical aspects of the project. Environmental documentation, permitting and public outreach issues will be discussed.
Deliverables:
- Meeting notes.

Comments/Assumptions:
- One four-hour meeting will be required.

1.4. Monthly Status Meetings
CONSULTANT will coordinate monthly meetings with TRLIA to discuss project progress and issues that may affect project design or schedule. Appropriate CONSULTANT team members will attend as needed.

Deliverables:
- Meeting notes.

Comments/Assumptions:
- One 2 hour meeting will be required each month.

1.5. Monthly Progress Reports
CONSULTANT will prepare monthly progress reports that document project activities and update the project schedule and budget.

Deliverables:
- Progress reports (2 copies).

1.6. Quality Control
CONSULTANT will prepare a Quality Control Plan (QCP), which will provide the policies and specific actions that will be taken to ensure that high quality products are on time and within the specified budget. The QCP will define CONSULTANT’s management philosophy, approach and dedication for providing TRLIA with deliverables and supporting documents that are complete, conform to standards and meet or exceed the expectations of CONSULTANT and TRLIA. The Quality Control team will review technical approach as well as all deliverables submitted to TRLIA.

Deliverables:
- QC Plan (included in Project Guide).
- QC reviews on each deliverable.

Comments/Assumptions:
- QC reviews will be completed for all major deliverables.
1.7. Agency Coordination

CONSULTANT will facilitate coordination between TRLIA, USACE, Reclamation Board, DWR, and other involved agencies during the duration of the project.

Deliverables:
- Meeting notes, telephone conversation records and correspondence.

Comments/Assumptions:
- Files of external coordination will be provided.
Task 2. Yuba River Levee Pre-design

PART 1 - SPRR TO Simpson Lane

2.1. Basis of Design Report

Following the Alternative Analysis Check Point Meeting (part of the Phase 2 work), CONSULTANT will perform any additional analyses or assessments for the preferred alternative and develop a Basis of Design report (an expansion of the Alternatives Analysis TM prepared for levee repairs between the SPRR and Simpson Lane). The Basis of Design Report will summarize the levee repairs that are presented in the 30% design.

Deliverables:
- Draft Basis of Design Report (10 copies).

Comments/Assumptions:
- This element of the project will consist of levee improvements to the Yuba River levee, between the SPRR (upstream of SR 70) and Simpson Lane. For scoping purposes, the preferred alternative is assumed to be a cutoff wall between SPRR and Simpson Lane.
- Basis of Design Report will be submitted for review concurrently with the 30 percent PS&E submittal. Comments will be incorporated into a final Basis of Design report and into the 90 percent PS&E package.

2.1.1. Geotechnical Effort for Basis of Design (Parts 1 and 2)

CONSULTANT will prepare a geotechnical TM with final design recommendations for the preferred alternative (identified at the Alternatives Analysis Checkpoint Meeting). This geotechnical TM will be presented as an appendix to the Basis of Design Report.

Supplemental geotechnical analyses cover geotechnical aspects of the Basis of Design for improvements on the Yuba River south levee (left bank) from the confluence with the Feather River upstream to the levee terminus at the Gold Fields. The design water surface elevation will be the 200-year level described as 1/200 annual exceedence probability (AEP) as provided by MBK Engineers. The project has been assumed to consist of:
- Slope flattening on the water side of the levee near Highway 70,
- Raising the levee near the 1986 break,
- A berm to provide overlap just upstream of the Union Pacific Railroad,
- A slurry cutoff wall through the levee from Southern Pacific Railroad to just upstream of Simpson Lane, and

- Filling of a waterside ditch upstream of the USACE slurry cutoff wall in Sections 11 and 12 as described in the Phase 4 Problem Identification Report.

**Deliverables:**
- Geotechnical Design Recommendation Technical Memorandum (10 copies).

**2.2. Submit Draft Basis of Design Report**

**2.3. TRLIA and Agency Review**

TRLIA and outside agency review of Basis of Design Report.

**Comments/Assumptions:**
- Assume 14-calendar day review.

**2.4. Check Point Meeting**

CONSULTANT will conduct a meeting to review and verify with TRLIA, USACE and other agencies and stakeholders the final plan for repairs to the Yuba River levee between the SPRR and Simpson Lane.

**Deliverables:**
- Meeting Minutes.

**Comments/Assumptions:**
- One 4 hour meeting will be required.

**2.5. Finalize Basis of Design Report**

The draft Basis of Design Report will be finalized, incorporating reviewer's comments.

**Deliverables:**
- Basis of Design Technical Memorandum (10 copies).
PART 2 - REMAINING YUBA LEVEE REPAIRS

2.6. Basis of Design Report

A separate Basis of Design Report (including an alternatives analysis) will be completed for remaining levee repairs that are anticipated for the Yuba River levee between SR 70 and the Goldfields. CONSULTANT will perform any additional analyses or assessments for the preferred alternative. The Basis of Design Report will summarize the levee repairs that will be carried into the 30% design.

Deliverables:

→ Draft Basis of Design Report (10 copies).

Comments/Assumptions:

→ This element of the project will consist of remaining levee improvements to the Yuba River levee, between SR 70 and the Goldfields. For scoping purposes, the preferred alternative is assumed to be minor levee shaping between SR 70 and the SRRR and filling of a waterside toe ditch near the Gold Fields.

→ The Geotechnical Design Recommendation Technical Memorandum completed for Task 2.1.1 provide the geotechnical recommendations required for Part 2 of this project, and no further analyses are required.

→ Basis of Design Report will be submitted for review. Comments will be incorporated into a final draft Basis of Design and into the 30 percent PS&E package.

2.7. Submit Draft Basis of Design Report

2.8. TRLIA and Agency Review

TRLIA and outside agency review of Basis of Design Report.

Comments/Assumptions:

→ Assume 14 calendar day review.

2.9. Check Point Meeting

CONSULTANT will conduct a meeting to review and verify with TRLIA, USACE and other agencies and stakeholders the final plan for repairs to the Yuba River levee.

Deliverables:

→ Meeting Minutes.
Comments/Assumptions:

- One 4-hour meeting will be required.

2.10. Finalize Basis of Design Report

The draft Basis of Design Report will be finalized, incorporating reviewer's comments.

Deliverables:

- Basis of Design Technical Memorandum (10 copies).
Task 3. Environmental Compliance and Permits

This section describes CONSULTANT’s approach for preparing the environmental compliance documentation for the Yuba River Levee Improvements Project. Scope and cost reflects the effort necessary to comply with the provisions of the California Environmental Quality Act (CEQA) and is based on previous experience with other levee improvement projects for TRLIA. Our current understanding is the project encompasses the segment of the Yuba River south levee from the Southern Pacific Railroad (SPRR) upstream to the levee extent at the Yuba Goldfields. For scoping purposed it was assumed that the primary treatments will be a conventional seepage cutoff wall installed through the crown of the levee, as well as a seepage berm to reinforce the landside of the levee for the subsegment near SPRR, and filling of the waterside borrow ditch downstream of the Goldfields.

Based on present understanding of the project treatments, this scope of work assumes the following regulatory points:

- TRLIA will provide all rights-of-entry to affected properties before CONSULTANT conducts environmental surveys.

- CONSULTANT will be provided with aerial photographs of the project site at a suitable scale and scale drawings of existing and proposed roadway conditions including existing and proposed right-of-way lines; construction-related areas associated with the three alternatives, including existing and proposed right-of-way, equipment and material staging areas, and temporary access roads; parcel lines; and topographic information, for conducting environmental surveys.

- Impacts on endangered species and their habitat would be limited to elderberry shrubs (host plant of the valley elderberry longhorn beetle, listed under the federal Endangered Species Act.

- Treatments may affect jurisdictional waters of the U.S.; therefore, this scope of work includes a wetland delineation and application for a 404 Nationwide Permit; however, it is not known if the project area includes jurisdictional features or the type of Nationwide Permit that would be applied.

- Levee degrading may affect vegetation in the riparian zone; therefore, an application for a streambed alternation agreement is included in this scope of work.

- Section 106 compliance (required for a 404 permit) has not been scoped at this time. The need for such work will be determined based on the findings of the CEQA process and determination of need for a 404 permit.

The nature of the project, combined with previous experience in preparing CEQA compliance documents, suggests that the environmental analysis be divided into an initial study phase (Phase I) and a negative declaration phase (Phase II). For purposes of developing a scope of work and cost estimate, it is assumed
that the initial study will identify significant impacts and that TRLIA will choose to prepare a mitigated negative declaration.

3.1. CEQA Phase I. Initial Study

3.1.1. Prepare Project Description

CONSULTANT will prepare a project description reflective of the level of detail typically found in an EIR project description.

3.1.2. Prepare Administrative Draft Initial Study

In addition to the project description, the initial study will include an introduction, environmental setting, and impacts and mitigation measures if significant impacts are identified. The initial study will address each of the topics indicated in the environmental checklist form in the State CEQA Guidelines. The impacts and mitigation chapter will include a discussion of the criteria for determining significance of an impact, impact mechanisms, and the impact assessment. As the analysis is being conducted, CONSULTANT will keep TRLIA informed regarding the status and the conclusions of the impact analysis.

The State CEQA Guidelines encourage lead agencies to avoid preparing a “naked” or unsubstantiated checklist. CONSULTANT will address each of the topics indicated in the checklist and clearly explain why the project would result in no impact, a less than significant impact, or a potentially significant impact. The analysis will be conducted as thoroughly as possible as a means to ensure the initial study/negative declaration is as legally defensible as possible. In addition, conducting a thorough analysis in the initial study will help to focus the analysis that may be conducted as part of an EIR. Although an EIR is presently not anticipated, a detailed analysis in an initial study will serve as the basis for eliminating some topics from consideration in an EIR to ensure streamlining.

If significant impacts are identified, CONSULTANT will propose mitigation to reduce those impacts to a less-than-significant level. CONSULTANT will develop mitigation that can be readily incorporated into a mitigation reporting and monitoring plan.

3.1.3. Prepare Initial Study

Under this task, CONSULTANT will incorporate TRLIA (and TRLIA’s designees’) comments into a final version of the initial study. If necessary, CONSULTANT will meet with TRLIA and their designees to review the draft initial study and discuss comments.

3.2. CEQA Phase II. Negative Declaration

Under Phase II, CONSULTANT will prepare (on behalf of TRLIA) the negative declaration, review comments, and mitigation reporting and monitoring plan.
3.2.1. Prepare Administrative Draft Mitigated Negative Declaration

It is assumed that a mitigated negative declaration will be prepared for the project. The draft negative declaration will include a brief description of the project and proposed findings that the project will not result in a significant impact on the environment.

3.2.2. Prepare Mitigated Negative Declaration

CONSULTANT will incorporate comments into a mitigated negative declaration. CONSULTANT will prepare and distribute (on behalf of TRLIA) a notice of intent to adopt the negative declaration.

3.2.3. Review Comments

CONSULTANT will assist TRLIA in reviewing and considering agency and public comments on the Negative Declaration. CONSULTANT will assist in preparing the administrative record on how agency and public comments were considered by TRLIA.

3.2.4. Prepare Mitigation Reporting and Monitoring Plan

TRLIA must prepare and adopt a mitigation reporting and monitoring plan within two months of adopting the negative declaration. The mitigation reporting and monitoring plan will describe the mitigation measures, how the measures will be implemented, who will be responsible for implementing the measures, and performance standards. It is assumed that the mitigation reporting and monitoring plan would be prepared based on final mitigation adopted in the negative declaration; however, the proposed plan could be included in the review draft of the initial study at TRLIA’s discretion.

3.2.5. Attend Public Hearing

For an initial study and negative declaration, there is no requirement for a formal public hearing. However, CONSULTANT will attend a public hearing on the project at TRLIA’s discretion. At the hearing, CONSULTANT will explain the CEQA process, present the findings of the Initial Study/Negative Declaration, and answer questions on the environmental document.

3.3. Public Outreach

CONSULTANT will conduct public outreach with adjacent residents and other stakeholders at the discretion of TRLIA as part of the environmental compliance documentation. For the compliance efforts in this scope, public outreach must include the Notice of Intent to Adopt a Mitigated Negative Declaration. At TRLIA’s direction, CONSULTANT will also conduct group or one-on-one meetings with neighbors, develop informational materials, and manage media relations. The scope will be defined up to the level of effort provided in the cost estimate.
3.4. Permitting

3.4.1. Conduct Biological Field Studies

CONSULTANT will conduct biological field studies to support preparation of the biological assessment (BA), wetland delineation report, and CEQA document. Field surveys will be conducted by resource specialists who have previous experience in the project area according to resource agency standards. The field surveys will be conducted to document the following resources:

- **Special-Status Plants.** CONSULTANT will conduct a floristic inventory in the project area according to the California Native Plant Society’s (CNPS) guidelines for rare and endangered plant surveys.

- **Special-Status Wildlife.** CONSULTANT will conduct reconnaissance-level surveys of the project site for wildlife species, including special-status species.

- **Special-Status Fish.** CONSULTANT will carry out a reconnaissance-level survey to qualitatively evaluate the fish habitat present at the project site and downstream of the site. CONSULTANT will not conduct any fish sampling because of the potential presence of special-status fish species that might require a special permit. CONSULTANT will incorporate an essential fish habitat assessment, required by NOAA-Fisheries, into the BA. This assessment covers protective measurements for commercially valuable species, regardless of endangered species status.

- **Waters of the United States (Including Wetlands).** Wetlands will be delineated using the routine on-site methods described in the USACE 1987 Wetland Delineation Manual. Other waters of the United States will be identified based on observable ordinary high-water mark.

- **Noxious Weeds.** A list of noxious weed species will be obtained from the County Agricultural Commissioner. The field survey will document the presence and extent of noxious weed infestations.

- **Plant Communities and Associated Wildlife Habitats.** Plant communities and associated wildlife habitats will be characterized and mapped during the field surveys. The plant communities will be classified according to the list of California terrestrial natural communities recognized by the NDDB.

- **Native Trees.** CONSULTANT will document all individual native trees that occur in sensitive habitats and native trees in upland habitats that are greater than 6 inches diameter breast height. The purpose of this field task is to document native trees that would be directly removed or indirectly affected during construction. CDFG and NOAA-Fisheries will most likely require compensatory mitigation if willows or other riparian trees are removed during construction. The number of individual trees or shrubs removed during construction may be used to calculate mitigation plantings.

Resources located during field surveys will be mapped on aerial photographs and documented on field data forms. The survey corridor will include the existing and proposed right-of-way, equipment and material staging areas, and temporary access roads.
3.4.2. Prepare Wetland Delineation Report

CONSULTANT will prepare a report and map that document the methods used to delineate waters of the United States (including wetlands) and the results of this delineation. The report will be submitted to USACE for verification. CONSULTANT will attend the site verification visit with USACE to address questions and receive feedback on the delineation. After the USACE verification, a final report and map will be prepared.

3.4.3. Attend Informal Consultation Meetings with CDFG, USFWS and NOAA-Fisheries

CONSULTANT will attend up to two informal consultation meetings with CDFG, USFWS, and NOAA-Fisheries biologists to discuss impacts to listed species and potential mitigation measures.

3.4.4. Prepare BA and Attend 2 Formal Consultation Meetings with CDFG, USFWS, and NOAA-Fisheries

CONSULTANT will prepare an administrative draft BA for TRLIA review and a draft BA for resource agency review. The scope assumes that the CDFG, USFWS, and NOAA-Fisheries will not require additional field studies to support analysis of potential growth-inducing impacts on endangered species. CONSULTANT will attend up to 2 formal consultation meetings with CDFG, USFWS, and NOAA-Fisheries.

3.4.5. Prepare CWA 404 Permit Application

Under Section 404 of the CWA, a permit is required from USACE for the placement of dredged or fill material into waters of the United States, including wetlands. Projects may be authorized under existing general permits (Nationwide Permits) or may require an individual permit. A Nationwide Permit is assumed due to the anticipated extent of fill in waters of the United States.

CONSULTANT will submit an application to USACE to request a Nationwide Permit under CWA Section 404 for impacts affecting waters of the United States, including wetlands. A pre-application meeting may be held with USACE to obtain guidance in addressing impact minimization and mitigation issues.

3.4.6. Prepare CWA 401 Certification Application

CWA Section 401 requires that the discharge of dredged or fill material into waters of the United States, including wetlands, does not violate state water quality standards. As required by Section 404 of the CWA, water quality certification from Regional Water Quality Control Board (RWQCB) must be obtained for permit compliance. CONSULTANT will compile the necessary information and submit a complete certification package to RWQCB. A certification fee to be provided by TRLIA must be included in the package. Completion of the CEQA process is required before certification may be granted.
3.4.7. Prepare Streambed Alteration Agreement Application

A streambed alteration agreement, in compliance with Section 1600 of the California Fish and Game Code, is required when projects will substantially divert, obstruct, or change the natural flow of a river, stream or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed. A formal application package will be prepared, describing the project features; construction period; construction methods; impacts to vegetation, fish, and wildlife; and the proposed monitoring plan. TRLIA will be required to pay an application fee to CDFG. Completion of the CEQA process is required before the agreement can be issued.

3.5. Reclamation Board Encroachment Permit for Yuba River Levee Repairs

CONSULTANT will prepare a Reclamation Board encroachment permit application and supporting documentation for approximately 1.3 miles of left bank levee repair/improvements on the Yuba River between the former Southern Pacific Railroad (SPRR) to the Gold Fields. An encroachment permit from the Board will be required for the levee embankment repairs and improvements. A project-specific encroachment permit application can be adapted from the two former Yuba River permits utilized for the slurry wall and seepage berm improvements recently obtained in 2004 and 2005. Team coordination efforts will be needed before and subsequent to submitting an updated, project-specific encroachment permit application. The project-specific encroachment permit application for TRLIA’s levee repairs/improvements on the Yuba River between the former SPRR and Simpson Lane will require an endorsement from USACE, RD 784 and possibly from the neighboring Reclamation District (the Levee Commission of Marysville).

CONSULTANT services will include: (1) preparation and submittal of the subject Reclamation Board Encroachment Permit Application; (2) follow-up meetings and informational submittals, on an as-needed basis to the Reclamation Board staff prior to the anticipated issuance during the spring of 2006; (3) review and recommendation of draft permit conditions and milestones on an as-needed basis; and (4) assist with pre-construction design submittals to the Reclamation Board staff on an as-needed basis.

3.6. Other Permits

CONSULTANT will work with other agencies and affected parties to help secure needed encroachment and other permits. It is anticipated that encroachment permits may be required from Caltrans and the Union Pacific Railroad for levee improvement work near their facilities.
Task 4. Plans, Specifications and Estimates (PS&E)

CONSULTANT will prepare finished construction drawings, specifications, and estimate of probable construction costs suitable for bidding and construction. Two separate PS&E packages will be prepared, one for levee repairs between the SPRR (upstream of SR 70) and Simpson Lane (referred to as Part 1), and a second for remaining repairs to the Yuba Levee between SR 70 and the Gold Fields (Part 2). For scoping purposes, the design for Part 1 is assumed to be a cutoff wall between SPRR and Simpson Lane, and the design for Part 2 is minor levee shaping between SR 70 and the SPRR and filling of a waterside toe ditch near the Gold Fields. PS&E for each will be an iterative process involving three levels of design (30 percent, 90 percent, and 100 percent).

PS&E will be reviewed by TRLIA and other agencies (including USACE) at the 30 percent and 90 percent levels. CONSULTANT will revise PS&E incorporating the comments from each review. The preparation of PS&E will include plans, details, cross sections, technical specifications, quantity calculations, and preliminary and estimate of probable construction costs. CONSULTANT will complete utility coordination related to the construction documents that are required for construction.

PART 1 - SPRR TO SIMPSON LANE

4.1. 30 Percent PS&E

30 Percent PS&E will include analyses, design, preliminary plans, preliminary technical specifications, preliminary quantities and a preliminary budget level cost estimate. The design will be submitted following internal QC review.

4.1.1. Drawings

Drawings will be prepared using AutoCad LDD software. A complete sheet listing table will be provided. These plans will include general layouts, preliminary topographic survey and mapping data, limited cross-sections, and a levee profile. The drawings will be developed in accordance with USACE formats (Tri-Service A/E/C CADD Standards).

4.1.2. Technical Specifications

Technical specifications will include preliminary specifications for major design features. Technical specifications will be prepared using Specs-Intact (the USACE standard).

4.1.3. Engineer's Report

CONSULTANT will prepare written documentation of engineering design. Documentation will consist of a binder containing additional field investigations (if any), analyses, design calculations, quantity take-offs and geometric calculations, utility information, quality control reviews and meeting notes. The Engineer's report will focus on materials prepared following completion of the Basis of Design report.
4.1.4. Cost Estimate

CONSULTANT will prepare a budget level cost estimate. Quantity take-off calculations and cost estimates will be prepared in a Microsoft Excel™ spreadsheet.

4.1.5. Quality Control

The 30 Percent submittal will undergo an internal quality assurance/quality control review per the project Quality Control Plan (QCP) prior to submittal.

4.1.6. Submit 30 Percent PS&E

**Deliverables:**

- 30 Percent PS&E Package (10 copies).

**Comments/Assumptions:**

- All required survey information for the project levee and surrounding work area will be performed by others and provided to CONSULTANT. Topographic information will be provided to CONSULTANT in AutoCAD format, with a minimum 1-foot contour interval. Field surveys will be completed to verify surface topography in areas to receive levee improvements, with levee cross sections completed every 200 feet on average. Land ownership information (including owner name and APN) will be included with survey information. Aerial images of the work area (taken within the last five years) will be obtained by others and provided to the CONSULTANT for use in the drawings. This information will be provided to the CONSULTANT by the start date of this task, as indicated on the project schedule.

- All required hydraulic and hydrology, including the determination of the 100-year and 200-year water surface elevations, will be performed by others and provided to CONSULTANT. This information will be provided to the CONSULTANT by the start date of this task, as indicated on the project schedule.

4.1.7. 30 Percent TRLIA and Agency Review

A 14-day review of 30 Percent PS&E will be conducted by TRLIA and other agencies. At the end of the review period, a design review meeting will be held with the reviewers to discuss comments.

**Deliverables:**

- Meeting Notes.

**Comments/Assumptions:**

- One 4-hour design review meeting will be required.
4.2. 90 Percent PS&E

Design will proceed to the 90 Percent level; during which comments received on the 30 Percent design will be incorporated. The 90 Percent submittal will include a full set of drawings, draft specifications, quantities, and an MCACES cost estimate. Final detailed survey topography and survey control will be included. 90 Percent PS&E will be submitted following internal QC.

4.2.1. Drawings

It is anticipated that plans will include the sheets listed below. The drawings will be developed in accordance with USACE formats (Tri-Service A/E/C CADD Standards). Anticipated sheets are listed below:

**Table 1. Yuba River South Levee Preliminary Drawing List (Part 1)**

<table>
<thead>
<tr>
<th>Type of Drawings</th>
<th>Number of Sheets</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td></td>
</tr>
<tr>
<td>Location Maps</td>
<td>1 Sheet</td>
</tr>
<tr>
<td>Survey Calibration</td>
<td>1 Sheet</td>
</tr>
<tr>
<td>Levee Alignment Tabulation</td>
<td>1 Sheet</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Civil Plans, Cross Sections and Details</strong></td>
<td></td>
</tr>
<tr>
<td>Cross Sections (1 in = 10 ft)</td>
<td>6 Sheets</td>
</tr>
<tr>
<td>Earthwork and Other Details</td>
<td>3 Sheets</td>
</tr>
<tr>
<td>General Notes and Points of Contact</td>
<td>1 Sheet</td>
</tr>
<tr>
<td>Misc and Tagged Tables</td>
<td></td>
</tr>
<tr>
<td><strong>Utility Drawings</strong></td>
<td></td>
</tr>
<tr>
<td>Misc Utilities Details</td>
<td>1 Sheet</td>
</tr>
<tr>
<td>Soil Borings and Profiles</td>
<td>6 Sheets</td>
</tr>
<tr>
<td>Logs of Explorations and Profile</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>40 Sheets</td>
</tr>
</tbody>
</table>
4.2.2. Specifications

Technical specifications will include all required applicable sections. The technical specifications will be developed in accordance with USACE formats. Specifications will be prepared utilizing SpecsIntact. General conditions from Sacramento County will be used. General conditions will be prepared using MS Word.

4.2.3. Engineer’s Report

CONSULTANT will update the written documentation of engineering design, adding information developed since the 30 Percent design submittal. Documentation will consist of a binder containing additional field investigations (if any), analyses, design calculations, quantity take-offs and geometric calculations, utility information, quality control reviews and meeting notes.

4.2.4. Estimate of Probable Construction Costs

CONSULTANT will prepare a detailed estimate of probable construction costs using MCACES.

4.2.5. Quality Control

The 90 Percent submittal will undergo an internal quality assurance/quality control review per the project Quality Control Plan (QCP) prior to submittal.

4.2.6. Submit 90 Percent PS&E

Deliverables:
- 90 Percent PS&E (10 copies).

4.2.7. 90 Percent TRLIA and Agency Review

A 14 day review of 90 Percent PS&E will be conducted by TRLIA and other agencies. At the end of the review period, a design review meeting will be held with the reviewers to discuss comments.

Deliverables:
- Meeting Notes.

Comments/Assumptions:
- One 4-hour design review meeting will be required.

4.3. Final PS&E

Design will proceed during which comments received on the 90 Percent PS&E will be incorporated. A final round of internal QC will be conducted. The final plans and specifications will include bid-ready
construction drawings and specifications. A final MCACES cost estimate will be prepared and submitted under separate cover.

4.3.1. Final Drawings

A set of final bid ready construction drawings will be prepared, which will incorporate appropriate comments received.

4.3.2. Final Specifications

A set of final bid ready specifications will be prepared, that will incorporate comments received.

4.3.3. Engineer's Report

CONSULTANT will prepare final documentation of engineering design, updating the report with items completed since the 90 Percent design submittal.

4.3.4. Estimate of Probable Construction Costs

Based on the final design, CONSULTANT will prepare a final estimate of probable construction costs using MCACES. The estimate will be submitted to TRLIA under a separate cover.

4.3.5. Quality Control

The final submittal will undergo an internal quality assurance/quality control review per the project Quality Control Plan (QCP) before submittal.

Deliverables:

- 10 full-size and 20 half-size sets of construction plans. One master copy of the Construction Drawings will also be included as ink on mylar.
- 20 bound sets of specifications. One unbound reproducible set will also be included.
- Final Estimate of Probable Construction Cost.

Comments/Assumptions:

- The Yuba River levee repairs that will be included as Part 1 of this project are assumed to consist of:
  - A slurry cutoff wall through the levee from Southern Pacific Railroad to just upstream of Simpson Lane
  - A berm to provide overlap just upstream of the Southern Pacific Railroad.
- TRLIA will distribute bid ready Construction Drawings and Specifications to potential bidders.
Quality Control Plan (TCP) prior to submittal.

The 30 percent submittal will undergo an internal quality assurance/quality control review per the project.

4.4.5 Quality control estimates will be prepared in a phased approach.

4.4.4 Cost Estimate

4.4.3 Engineer's Report

4.4.2 Technical Specifications

4.4.1 Drawings

Following internal review, preliminary quantities and preliminary budget level cost estimate. The design will be submitted 30 percent phase will produce and design. Preliminary plans, Preliminary technical specifications, and preliminary cost estimate.

PART 2 - REMAINING YUBA LEVEL REPAIRS

Prepares.

Any opinions of probable project cost or probable construction cost provided by CONSULTANT are made on the basis of information available to CONSULTANT and on the basis of CONSULTANT's experience and judgment in the field of civil engineering.
4.4.6 Submit 30 Percent PS&E

Deliverables:

- 30 Percent PS&E Package (10 copies).

Comments/Assumptions:

- All required survey information for the project levee and surrounding work area will be performed by others and provided to CONSULTANT. Topographic information will be provided to CONSULTANT in AutoCAD format, with a minimum 1-foot contour interval. Field surveys will be completed to verify surface topography in areas to receive levee improvements, with levee cross sections completed every 200 feet on average. Land ownership information (including owner name and APN) will be included with survey information. Aerial images of the work area (taken within the last five years) will be obtained by others and provided to the CONSULTANT for use in the drawings. This information will be provided to the CONSULTANT by the start date of this task, as indicated on the project schedule.

- All required hydraulic and hydrology, including the determination of the 100-year and 200-year water surface elevations, will be performed by others and provided to CONSULTANT. This information will be provided to the CONSULTANT by the start date of this task, as indicated on the project schedule.

4.4.7 30 Percent TRLIA and Agency Review

A 30-day review of 30 Percent PS&E will be conducted by TRLIA and other agencies. At the end of the review period, a design review meeting will be held with the reviewers to discuss comments.

Deliverables:

- Meeting Notes.

Comments/Assumptions:

- One 4-hour design review meeting will be required.

4.5 90 Percent PS&E

Design will proceed to the 90 Percent level; during which comments received on the 30 Percent design will be incorporated. The 90 Percent submittal will include a full set of drawings, draft specifications, quantities, and an MCACES cost estimate. Final detailed survey topography and survey control will be included. 90 Percent PS&E will be submitted following internal QC.
4.6.1. Drawings

It is anticipated that plans will include the sheets listed below. The drawings will be developed in accordance with USACE formats (Tri Service A/E/C CADD Standards). Anticipated sheets are listed below:

Table 2: Yuba River South Levee Preliminary Drawing List (Part 2)

<table>
<thead>
<tr>
<th>Type of Drawings</th>
<th>Number of Sheets</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td></td>
</tr>
<tr>
<td>Location Maps</td>
<td>1 Sheet</td>
</tr>
<tr>
<td>Access and Staging Area Plans</td>
<td>2 Sheets</td>
</tr>
<tr>
<td>Orthophotos, Plan and Profiles (1 in = 40 ft)</td>
<td>4 Sheets</td>
</tr>
<tr>
<td>Levee Earthwork and Other Details</td>
<td>2 Sheets</td>
</tr>
<tr>
<td>Utility Drawings</td>
<td></td>
</tr>
<tr>
<td>Misc Utilities Details</td>
<td>1 Sheet</td>
</tr>
<tr>
<td>Logs of Explorations and Profile</td>
<td>3 Sheets</td>
</tr>
<tr>
<td>TOTAL</td>
<td>25 Sheets</td>
</tr>
</tbody>
</table>

4.5.2. Specifications

Technical specifications will include all required applicable sections. The technical specifications will be developed in accordance with USACE formats. Specifications will be prepared utilizing Specintact. General conditions from Sacramento County will be used. General conditions will be prepared using MS Word.

4.5.3. Engineer's Report

CONSULTANT will update the written documentation of engineering design, adding information developed since the 30 Percent design submittal. Documentation will consist of a binder containing
additional field investigations (if any), analyses, design calculations, quantity take-offs and geometric calculations, utility information, quality control reviews and meeting notes.

4.5.4. Estimate of Probable Construction Costs

CONSULTANT will prepare a detailed estimate of probable construction costs using MCACES.

4.5.5. Quality Control

The 90 Percent submittal will undergo an internal quality assurance/quality control review per the project Quality Control Plan (QCP) prior to submittal.

4.5.6. Submit 90 Percent PS&E

Deliverables:
- 90 Percent PS&E (10 copies).

4.5.7. 90 Percent TRLIA and Agency Review

A 30-day review of 90 Percent PS&E will be conducted by TRLIA and other agencies. At the end of the review period, a design review meeting will be held with the reviewers to discuss comments.

Deliverables:
- Meeting Notes.

Comments/Assumptions:
- One 4-hour design review meeting will be required.

4.6. Final PS&E

Design will proceed during which comments received on the 90 Percent PS&E will be incorporated. A final round of internal QC will be conducted. The final plans and specifications will include bid-ready construction drawings and specifications. A final MCACES cost estimate will be prepared and submitted under separate cover.

4.6.1. Final Drawings

A set of final bid-ready construction drawings will be prepared, which will incorporate appropriate comments received.

4.6.2. Final Specifications

A set of final bid-ready specifications will be prepared, that will incorporate comments received.
4.6.3. Engineer's Report

CONSULTANT will prepare final documentation of engineering design, updating the report with items completed since the 90 Percent design submittal.

4.6.4. Estimate of Probable Construction Costs

Based on the final design, CONSULTANT will prepare a final estimate of probable construction costs using MCACES. The estimate will be submitted to TRLIA under a separate cover.

4.6.5. Quality-Control

The final submittal will undergo an internal quality assurance/quality control review per the project Quality Control Plan (QCP) before submittal.

Deliverables:

- 10 full-size and 20 half-size sets of construction plans. One master copy of the Construction Drawings will also be included as ink on mylar.

- 20 bound sets of specifications. One unbound reproducible set will also be included.

- Final Estimate of Probable Construction Cost.

Comments/Assumptions:

- The Yuba River levee repairs included in Part 2 of this project are assumed to consist of:

  - Slope flattening on the water side of the levee near SR-70

  - Raising the levee near the 1986 break

  - Filling of a waterside ditch upstream of the USACE slurry cutoff wall in Sections 11 and 12 as described in the Phase 4 PIR

- TRLIA will distribute bid-ready Construction Drawings and Specifications to potential bidders.

- Any opinions of probable project costs or probable construction cost provided by CONSULTANT are made on the basis of information available to CONSULTANT and on the basis of CONSULTANT's experience and qualifications, and represents its judgment as an experienced and qualified engineer. However, since CONSULTANT has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor methods of determining prices, or over competitive bidding or marked conditions, CONSULTANT does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable costs CONSULTANT prepares.
Task 5. Rights-Of-Way (ROW), Easement Requirements and Utilities Coordination

PART 1 - SPRR TO SIMPSON LANE

5.1. Real Estate Requirements
CONSULTANT will identify temporary construction and permanent easements based on 30 Percent PS&E (including requirements for drainage, levee, temporary construction staging, etc). CONSULTANT will coordinate with the Yuba County, UPRR and Caltrans during design to discuss real estate and access requirements during construction.

Deliverables:
- Land use map delineating all temporary construction and permanent easements required for the project. (10 copies)

Comments/Assumptions:
- Preparation of plat and legal descriptions will be performed by others. Field surveys to identify project boundaries will be performed by others.
- Real estate acquisitions will be performed by others.

5.2. Utility Identification Coordination
5.2.1. Conflict Identification
CONSULTANT will provide coordination with TRLIA and relevant utility companies regarding the potential impact of the proposed project on existing and planned future utilities. CONSULTANT will collect information and identify conflicts.

Deliverables:
- Utility Inventory (will be included in the Engineer's Report submittal).

Comments/Assumptions:
- Applicable information in Yuba County files, including utility location and utility company contact information, will be provided to the CONSULTANT.
5.2.2. Utility Relocation Coordination

CONSULTANT will coordinate with the appropriate agencies for the relocation of identified utility conflicts.

Deliverables:
- Meeting Notes, telephone conversation records and correspondence (will be included in the Engineer's Report submittal).

**PART 2 - REMAINING YUBA LEVEE REPAIRS**

5.3. Real Estate Requirements

CONSULTANT will identify temporary construction and permanent easements based on 90 Percent PS&E (including requirements for drainage, levee, temporary construction staging, etc). CONSULTANT will coordinate with the Yuba County, UPRR and Caltrans during design to discuss real estate and access requirements during construction.

Deliverables:
- Land use map delineating all temporary construction and permanent easements required for the project. (10 copies)

Comments/Assumptions:
- Preparation of plat and legal descriptions will be performed by others. Field surveys to identify project boundaries will be performed by others.
- Real estate acquisitions will be performed by others.

5.4. Utility Identification Coordination

5.4.1. Conflict Identification

CONSULTANT will provide coordination with TRLIA and relevant utility companies regarding the potential impact of the proposed project on existing and planned future utilities. CONSULTANT will collect information and identify conflicts.

Deliverables:
- Utility Inventory (will be included in the Engineer's Report submittal).

Comments/Assumptions:
- Applicable information in Yuba County files, including utility location and utility company contact information, will be provided to the CONSULTANT.
5.4.2. Utility Relocation Coordination

CONSULTANT will coordinate with the appropriate agencies for the relocation of identified utility conflicts.

Deliverables:

➤ Meeting Notes, telephone conversation records and correspondence (will be included in the Engineer’s Report submittal).
Task 6. Pre-Bid Assistance and Construction Support

After the Final PS&E are submitted, CONSULTANT will assist TRLIA during the pre-construction and construction phases of the project. CONSULTANT bidding and construction services will consist of the following:

PART 1 - SPRR TO SIMPSON LANE

6.1. Bidding Support (Addenda and Clarifications)
CONSULTANT will assist TRLIA with the bidding process for Part 1 of the Phase 4 project, including responding to provide addenda clarifying or technical questions related to the construction drawings from potential bidders.

Deliverables:
- One addendum to bid documents.

Comments/Assumptions:
- One addendum will be required.

6.2. Pre-Bid Meetings
CONSULTANT will attend a pre-bid meeting as requested by TRLIA. In addition, one meeting is assumed for coordination with TRLIA.

Deliverables:
- Meeting notes.

Comments/Assumptions:
- One pre-bid meeting and one coordination meeting are assumed.

6.3. Pre-Construction Meeting
CONSULTANT will attend a pre-construction meeting as requested by TRLIA.

Deliverables:
- Meeting Notes.

Assumptions:
- One meeting will be required.
6.4. Construction-Phase Services

CONSULTANT will assist TRLIA and TRLIA’s Construction Manager as directed by TRLIA. Continuing construction support will be provided for the remainder of the Phase 2 project (Bear River, WPIC and Yuba River levee repairs), and construction support will be provided for Part 1 of the Yuba River Phase 4 project. It is assumed that the Phase 4 construction will occur between May 15 and November 1, 2006. This support may include the following:

6.4.1. Request for Information Support

CONSULTANT will assist TRLIA with Requests for Information (RFIs) submitted by TRLIA’s Contractor and will respond to RFIs related to CONSULTANT’s scope of services.

Deliverables:
- Responses to RFIs.

Assumptions:
- Ten (10) RFIs will be submitted.

6.4.2. Shop Drawings and Submittal Clarification

CONSULTANT will review submittals from the Contractor as required by the technical specifications for clarification on behalf of TRLIA. CONSULTANT will review shop drawings submitted by Contractor for work related to CONSULTANT’s scope of services as requested by TRLIA. CONSULTANT will review and accept Contractor submittals, such as shop drawings, product data, samples and other data, as required by CONSULTANT, but only for the limited purpose of checking for conformance with the design concept and the information expressed in the contract documents. This review will not include review of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication process, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the sole responsibility of the Contractor. CONSULTANT’s review will be conducted with reasonable promptness while allowing sufficient time in CONSULTANT’s judgment to permit adequate review. Review of a specific item will not indicate that CONSULTANT has reviewed the entire assembly of which the item is a component. CONSULTANT will not be responsible for any deviations from the contract documents not brought to the attention of CONSULTANT in writing by the Contractor. CONSULTANT will not be required to review partial submissions nor those for which submissions of correlated items have not been received.

Deliverables:
- Reviews of submittals and shop drawings.

Assumptions:
- Twelve (12) submittal reviews.
6.4.3. Change Order Support

Should there be a change of conditions, claim, or other basis for a Change Order, CONSULTANT, as directed by TRLIA, will review the validity of the request and will assist TRLIA in its response.

Assumptions:

- Three (3) change orders will be submitted.

6.4.4. Field Visits and Site Meetings

CONSULTANT will conduct periodic field visits to observe progress and as requested by TRLIA. CONSULTANT will also attend bi-weekly site meetings between TRLIA and the Contractor. CONSULTANT's observation or monitoring portions of the work performed under construction contracts will not relieve the contractor from its responsibility for performing work in accordance with applicable contract documents. CONSULTANT will not control or have charge of, and will not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and will not manage, supervise, control or have charge of construction. CONSULTANT will not be responsible for the acts or omissions of the contractor or other parties on the project. CONSULTANT will be entitled to review all construction contract documents and to require that no provisions extend the duties or liabilities of CONSULTANT beyond those set forth in the CONSULTANT's Agreement with TRLIA.

Deliverables:

- Meeting and field notes.

Comments/Assumptions:

- Twelve (12) field visits and twelve (12) construction meetings will be required.

6.4.5. Record Documents

Based on change orders and field revisions to the construction drawings, CONSULTANT will compile record drawings of the constructed improvements for each bid package. Upon completion of the construction contract, CONSULTANT will compile for and deliver to TRLIA, a set of Record Documents conforming to the marked-up prints, drawings and other data furnished to CONSULTANT by the Contractor. This set of Record Documents will show the reported location of the work and significant changes made during the construction process. Because these Record Documents are based on unverified information provided by other parties that will be assumed reliable, CONSULTANT cannot and does not warrant their accuracy. It is assumed that no changes will be made to title sheets, standard details, demolition/staging, traffic control plans, boring logs, and the horizontal control plan.

Deliverables:

- Record Drawings.
Assumptions:

- As-built information including changes will be provided by TRLIA and/or Contractor.
- 40 hours of CAD operator time will be required to incorporate all changes.

**PART 2 - REMAINING YUBA LEVEE REPAIRS**

**6.5. Bidding Support (Addenda and Clarifications)**

CONSULTANT will assist TRLIA with the bidding process for Part 2 of the Phase 4 project, including responding to provide addenda clarifying or technical questions related to the construction drawings from potential bidders.

**Deliverables:**
- One addendum to bid documents.

**Comments/Assumptions:**
- One addendum will be required.

**6.6. Pre-Bid Meetings**

CONSULTANT will attend a pre-bid meeting as requested by TRLIA. In addition, one meeting is assumed for coordination with TRLIA.

**Deliverables:**
- Meeting notes.

**Comments/Assumptions:**
- One pre-bid meeting and one coordination meeting are assumed.

**6.7. Pre-Construction Meeting**

CONSULTANT will attend a pre-construction meeting as requested by TRLIA.

**Deliverables:**
- Meeting Notes.

**Assumptions:**
- One meeting will be required.
6.8. Construction-Phase Services

CONSULTANT will assist TRLIA and TRLIA’s Construction Manager as directed by TRLIA. Construction support will be provided for Part 2 of the Yuba River Phase 4 project. It is assumed that the Phase 4 construction will occur between May 15 and November 1, 2007. This support may include the following:

6.8.1. Request for Information Support

CONSULTANT will assist TRLIA with Requests for Information (RFIs) submitted by TRLIA’s Contractor and will respond to RFIs related to CONSULTANT’s scope of services.

Deliverables:

- Responses to RFIs.

Assumptions:

- Ten (10) RFIs will be submitted.

6.8.2. Shop Drawings and Submittal Clarification

CONSULTANT will review submittals from the Contractor as required by the technical specifications for clarification on behalf of TRLIA. CONSULTANT will review shop drawings submitted by Contractor for work related to CONSULTANT’s scope of services as requested by TRLIA. CONSULTANT will review and accept Contractor submittals, such as shop drawings, product data, samples and other data, as required by CONSULTANT, but only for the limited purpose of checking for conformance with the design concept and the information expressed in the contract documents. This review will not include review of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication process, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the sole responsibility of the Contractor.

CONSULTANT’s review will be conducted with reasonable promptness while allowing sufficient time in CONSULTANT’s judgment to permit adequate review. Review of a specific item will not indicate that CONSULTANT has reviewed the entire assembly of which the item is a component. CONSULTANT will not be responsible for any deviations from the contract documents not brought to the attention of CONSULTANT in writing by the Contractor. CONSULTANT will not be required to review partial submissions nor those for which submissions of correlated items have not been received.

Deliverables:

- Reviews of submittals and shop drawings.

Assumptions:

- Twelve (12) submittal reviews.
6.8.3. Change Order Support

Should there be a change of conditions, claim, or other basis for a Change Order, CONSULTANT, as directed by TRLIA, will review the validity of the request and will assist TRLIA in its response.

Assumptions:

→ Three (3) change orders will be submitted.

6.8.4. Field Visits and Site Meetings

CONSULTANT will conduct periodic field visits to observe progress and as requested by TRLIA. CONSULTANT will also attend bi-weekly site meetings between TRLIA and the Contractor. CONSULTANT’s observation or monitoring portions of the work performed under construction contracts will not relieve the contractor from its responsibility for performing work in accordance with applicable contract documents. CONSULTANT will not control or have charge of, and will not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and will not manage, supervise, control or have charge of construction. CONSULTANT will not be responsible for the acts or omissions of the contractor or other parties on the project. CONSULTANT will be entitled to review all construction contract documents and to require that no provisions extend the duties or liabilities of CONSULTANT beyond those set forth in the CONSULTANT’s Agreement with TRLIA.

Deliverables:

→ Meeting and field notes.

Comments/Assumptions:

→ Twelve (12) field visits and twelve (12) construction meetings will be required.

6.8.5. Record Documents

Based on change orders and field revisions to the construction drawings, CONSULTANT will compile record drawings of the constructed improvements for each bid package. Upon completion of the construction contract, CONSULTANT will compile and deliver to TRLIA, a set of Record Documents conforming to the marked-up prints, drawings and other data furnished to CONSULTANT by the Contractor. This set of Record Documents will show the reported location of the work and significant changes made during the construction process. Because these Record Documents are based on unverified information provided by other parties that will be assumed reliable, CONSULTANT cannot and does not warrant their accuracy. It is assumed that no changes will be made to title sheets, standard details, demolition/staging, traffic control plans, boring logs, and the horizontal control plan.

Deliverables:

→ Record Drawings:
Assumptions:

→ As-built information including changes will be provided by TRLIA and/or Contractor.

→ 40 hours of CAD operator time will be required to incorporate all changes.
Part B - Continuation of Phase 2 Construction Management

Task 7. - Construction Management (Phase 2 Bear River, WPIC and Yuba River Levee Repairs in 2006)

CONSULTANT will provide Construction Management services during the construction phase of the Bear River, WPIC, Yuba River and Olivehurst Detention Basin improvements. The construction management team will administer the construction contract established between TRLIA and the Contractor and will provide Quality Assurance services. It is assumed that all levee improvements will be completed under one construction contract.

Included herein are anticipated construction management services for the 2006 segment of the construction project. It is assumed that the 2006 construction period will be May 15 through November 1.

7.1. Communications and Correspondence

CONSULTANT will be the communication hub for the project. All communication and correspondence from and to the Contractor, TRLIA and CONSULTANT’S subconsultants will go through CONSULTANT’s construction management team. This duty involves processing and controlling large volumes of paperwork.

Deliverables:

- Correspondence, RFI and Submittal Logs.

Assumptions:

- One full time document controller will be needed for the 2006 duration of the project.
  CONSULTANT will use Project Tracker, CONSULTANT’s in-house developed document tracking software program, to log and track project paperwork.

7.2. Contract Administration

CONSULTANT will provide a Construction Manager and Resident Engineer for the construction period. The Resident Engineer will be on site full time for the duration of the construction period. The Construction Manager and Resident Engineer will be responsible for contract administration, which includes the following:

- Serving as the coordinator and facilitator between the primary parties involved in the contract,
- Processing submittals,
- Reviewing the construction schedule and monitoring progress,
Processing progress payments,

Using proper procedures to help avoid and resolve disputes,

Helping to resolve potential claims,

Negotiating and processing contract changes.

**Deliverables:**

- Daily Reports
- Monthly Status Reports.

**Assumptions:**

- One full time resident engineer will be needed for day to day contract management for the 2006 duration of the construction period. One part time construction manager will be needed for claims mitigation and change order negotiations for the duration of the construction period.

- Phase 2 construction work for the Bear River east of SR 70, the slurry walls for the WPIC, the Yuba River levee sand seepage berm, partial excavation of the Olivehurst Detention Basin, and the inlet structure of the Olivehurst pump station was be completed by November 1, 2005.

- Phase 2 work for the Bear River west of SR 70, the tie-in levee, Pump Station 6, the levee extension to Pump Station 6, completion of the levee raise along the WPIC, the final excavation of the Olivehurst Detention Basin, and the Olivehurst Detention Basin Restoration Project will be constructed between May 15 through November 1, 2006.

- TRLIA (via Contractor) will provide trailer, computers, office furniture, fax machine, copier, trailer, maintenance, restrooms, janitorial service, and supplies and utilities.

**7.3. Quality Assurance Inspection and Testing**

CONSULTANT will inspect and test to verify that the project is constructed in accordance with the requirements of the Contract. CONSULTANT will strive for the highest quality attainable within Project limitations. CONSULTANT will check materials brought on site for compliance with the Contract and approved submittals. CONSULTANT will check construction for proper location, dimension, elevation, and proper construction techniques. CONSULTANT’S geotechnical subconsultant will provide quality assurance testing of construction activities related to slurry wall construction and levee earthwork.

**Deliverables:**

- Daily reports.
- Test results.
Photodocumentation.

Assumptions:
- Two full time inspectors will be needed for the duration of the 2005 construction period. In addition, a mechanical inspector and an electrical inspector will be needed during this period (120 hours total).

7.4. Final Completion/Project Closeout

CONSULTANT will obtain warranties, guaranties, and record drawings; develop a punch list; verify lien releases; and process the last progress payment and final payment.

Deliverables:
Final Payment Forms Processed.

7.5. Other Geotechnical Quality Assurance Testing and Inspection

CONSULTANT will provide construction quality assurance for the 2006 season from May 15 to November 1. This task includes on-site observation and testing, laboratory testing, engineering oversight, and final QA report for the following:

- Waterside impervious fill and erosion protection on the Bear River,
- Relocation of the Algodon Canal pump station,
- Levee raising and widening on the WPIC,
- Landside ditch filling on the WPIC, and
- South Olivehurst Detention Basin ring levee construction.

Our budget assumes one technician can perform observation and testing. The following services will be provided:

- 150 technician days at 12 hours per day. (Note that hourly rate in fee proposal is based on average of 40 regular, 20 overtime, and 12 double time hours per week.)
- Project Engineer at 2 hours per day
- Senior engineer at 8 hours per week
- Principal engineer at 8 hours per month
- Laboratory testing:
  - 2 ASTM 1557 Compaction curves per week for 25 weeks
2 Plasticity Index per week for 25 weeks

2 Sieve analysis per week for 25 weeks

10 sets of 4 concrete cylinders

Deliverables:
- Daily reports.
- Test results.
- Final Summary Letter Report.

7.6. Environmental Monitoring During Construction

CONSULTANT will provide environmental monitoring during construction of the Feather-Bear-WPIC Levee Project (Phase 2), the Yuba River Project (Phase 2a) and the South Olivehurst Detention Basin Project (project) for TRLIA. The primary responsibility will be monitoring the implementation of the construction project and associated conservation and mitigation measures to ensure compliance with the conditions in the state and federal permits, as well as other tasks as described below. This scope of work is based on known and assumed conditions of the various permits and authorizations applicable to the project, including the mitigation monitoring plan required under the California Environmental Quality Act (CEQA) documents and the conditions outlined in permits issued by the California Department of Fish and Game (CDFG), the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the U.S. Fish and Wildlife Service (USFWS). The following key assumptions govern this scope and associated fee.

- The construction season will extend from June 1 through October 31, 2006, totaling 132 working days with 6-day work weeks.

- Environmental monitoring requires a full-time, dedicated, on-site monitor during construction, as conditioned by the Biological Opinion from USFWS.

- CONSULTANT monitor(s) will possess the requisite skills and certifications in accordance with the permit and authorization conditions.

- Monitoring for other permits and authorizations is compatible with and can be coincident with the full-time dedicated monitor as conditioned by the Biological Opinion from USFWS.

- No cultural resource monitoring is required by the Stage 1 permits. Cultural resource monitoring for Stage 2 (restoration of the setback area) will be conducted by others outside of this scope of work.

- CONSULTANT assumes a protocol that all communication is to be through the construction manager.
7.6.1. On Site Construction Support Service

CONSULTANT will provide a monitor that will be onsite throughout the construction phase of the project. The monitor will be onsite whenever work is occurring on the project. Services to be provided under this task include the following subtasks.

7.6.1.1. Environmental Awareness Training

CONSULTANT will provide an environmental training program for all construction personnel prior to the start of construction activities and as new crews are introduced to the project. The monitor will implement and report the results of this program. The program will educate workers about special-status species and waters of the U.S. present on and adjacent to the site and also about the regulations and penalties for unmitigated impacts on these sensitive resources.

Construction personnel will be required to attend environmental awareness training before working on any construction related activities. The training will include preparing and providing training materials (e.g., printed pamphlets). The monitor will be available to provide training to construction crews working in sensitive resource areas, on an as-needed basis (such as tailgate sessions).

7.6.1.2. Identify and Stake the Location of Sensitive Resources

CONSULTANT will identify and monitor the location of wetlands, riparian habitat, SRA cover, and other sensitive resources to be preserved. Protective fencing will be installed around all sensitive resources. Erosion-control fencing will also be placed at the edges of construction where the construction activities are upslope of wetlands and stream channels to prevent washing of sediments offsite. The contractor will be responsible for installing and maintaining protective/erosion-control fencing. The boundaries of environmentally sensitive areas will be determined, and erosion-control fencing will be installed, before any construction activities begin and will be maintained throughout the construction period.

The monitor will ensure the avoidance of all sensitive habitat areas, including adjacent wetlands. The protective/erosion-control fencing will be surveyed by the monitor each day of the construction period. The monitor will notify the contractor if repairs are required.

7.6.1.3. Implement Elderberry Shrub Protection

The monitor will identify and monitor the location of elderberry shrubs prior to construction. The monitor will also identify the buffer zone around each elderberry shrub (i.e., 20-foot buffer, where feasible) using grade stakes. The construction contractor will be responsible installing orange construction barrier fencing around each elderberry shrub. The monitor will be responsible for monitoring the condition of the fencing and will notify the contractor if repairs are required.

7.6.1.4. Perform Daily Wildlife Surveys in the Construction Areas

A CONSULTANT monitor will be responsible for conducting daily wildlife surveys and monitoring construction in habitat for sensitive species. Daily surveys will include walking and/or driving the project alignment in which construction is occurring. Wildlife occurring within the construction zone will be relocated to an undisturbed area adjacent to the project. All work in the immediate area shall cease until the animals can be relocated.
7.6.1.5. Perform Giant Garter Snake and Western Pond Turtle Surveys

CONSULTANT will also conduct preconstruction clearance surveys for giant garter snakes and western pond turtles. Suitable aquatic habitat and adjacent upland habitat up to 200 feet from aquatic habitat will be surveyed for the presence of these species. If a giant garter snake or western pond turtle is located in the project area, the location will be recorded on field forms and a GPS location will be taken. If a giant garter snake is encountered at the project site and is in imminent danger, the monitor will contact the USFWS prior to any handling of the snake. In the unlikely event that western pond turtles are located in an area that prevents them from moving out of harm’s way they will be relocated to an undisturbed area adjacent to the project.

7.6.1.6. Perform Raptor Surveys

CONSULTANT will conduct surveys for nesting Swainson’s hawks and other raptors along the project alignment. Surveys will be conducted three times each year of construction during the nesting period for Swainson’s hawk and other raptors (i.e., March through August) when most birds, would be exhibiting nesting behaviors. All suitable nest trees will be searched by walking the project alignment and using binoculars with a magnification greater than eight. The location of all nesting raptors located in the project area will be recorded on field forms and a GPS location will be taken. If Swainson’s hawks (or other special-status birds) are identified along the project alignment and nesting is not confirmed, a return visit may be required to determine if the bird is nesting in the project area.

7.6.1.7. Perform Nesting-Bird Surveys

CONSULTANT will conduct nesting bird surveys for nesting birds (non-raptor species) along the project alignment. Surveys will be conducted throughout the nesting period (i.e., March 1 through August) when most birds would be exhibiting nesting behaviors. All suitable nesting habitat will be searched by walking the project alignment and using binoculars. The location of all nesting birds located in the project area will be recorded on field forms and a GPS location will be taken.

7.6.2. Attend Meetings and Coordinate with Project Team

CONSULTANT will attend meetings the contractor, TRLIA, and other parties as necessary in support of the compliance activities. The monitor will also provide daily assistance with various other resource/regulatory tasks and attend required meetings with, or on behalf of, TRLIA as a liaison with the resource and regulatory agencies. This task includes weekly progress meetings and monthly management meetings.

7.6.3. Prepare Construction Monitoring Reports

CONSULTANT will prepare field forms to record monitoring activities, field inspections, project changes, and non-compliance events. The monitor will maintain daily logs, prepare weekly monitoring reports, and compile monthly monitoring reports that summarize the monitoring efforts, including any special-status species encountered, areas monitored, types of construction activities monitored, any non-compliance events, and corrective action taken, to be submitted to various resource agencies, as required by the environmental permits.
Part C - FEMA Certification of Contract Work

Task 8. FEMA Certification for Contract Work

8.1. FEMA Certification for Contract Work

CONSULTANT to package contract items and perform additional FEMA-required analyses and studies to achieve FEMA certification for the levee repairs completed as part of the contract work. Contract work includes levee repairs made during the Phase 1 (Yuba River levee), Phase 2 (Bear River, WPIC and Yuba river levees), and Phase 4 (Yuba River levee) projects.

8.1.1. FEMA Certification Objective

A key objective of this project is to design and construct levee improvements, in order to prevent mapping of the protected areas into a FEMA special flood hazard area. FEMA regulations for levees require review of designs to ensure that the project will “safely convey the base flood.” This review can either be done by FEMA’s contractor in Washington DC, or by another federal agency responsible for flood control. (Prudent practice is to secure this review on the design prior to construction.) FEMA will review designs, and once all concerns are addressed, will issue a Conditional Letter of Map Revision (CLOMR). Following construction, FEMA will then review changes during construction, as-built drawings, O&M manuals, hydrology, hydraulics, and the proposed floodplain maps. Once all concerns are addressed, FEMA will issue a Letter of Map Revision (LOMR).

The alternate process is to have a federal agency with responsibility for levee design, such as the Corps of Engineers or the NRCS, certify that the levee has been adequately designed and constructed to provide protection against the base flood. Once the project is built, the federal agency then prepares a Letter of Certification. This letter, plus as-built drawings, O&M Manuals, hydrology, hydraulics, and the proposed floodplain maps are then sent to FEMA for LOMR processing.

The request package will contain the FEMA application form along with information from previous analyses that address the following:

- **Freeboard:** Riverine levees must provide a minimum freeboard of three feet above the water-surface level of the base flood. An additional one foot above the minimum is required within 100 feet in either side of structures (such as bridges) riverward of the levee or wherever the flow is constricted. An additional one-half foot above the minimum at the upstream end of the levee, tapering to not less than the minimum at the downstream end of the levee, is also required.

- **Closures:** All openings must be provided with closure devices that are structural parts of the system during operation and design according to sound engineering practice.

- **Embankment protection:** Engineering analyses must be submitted that demonstrate that no appreciable erosion of the levee embankment can be expected during the base flood, as a result of either currents or waves, and that anticipated erosion will not result in failure of the levee.
embankment or foundation directly or indirectly through reduction of the seepage path and subsequent instability.

- **Embankment and foundation stability**: Engineering analyses that evaluate levee embankment stability must be submitted. The analyses provided must evaluate expected seepage during loading conditions associated with the base flood and demonstrate that seepage into or through the levee foundation and embankment will not jeopardize embankment or foundation stability.

- **Settlement**: Engineering analyses must be submitted that assess the potential and magnitude of future losses of freeboard as a result of levee settlement and demonstrate that freeboard will be maintained within the minimum standards.

- **Interior drainage**: An analysis must be submitted that identifies the source(s) of such flooding, the extent of the flooded area, and, if the average depth is greater than one foot, the water-surface elevation(s) of the base flood. This analysis must be based on the joint probability of interior and exterior flooding and the capacity of facilities (such as drainage lines and pumps) for evacuating interior floodwaters.

- **Other design criteria**: In unique situations, such as those where the levee system has relatively high vulnerability, FEMA may require that other design criteria and analyses be submitted to show that the levees provide adequate protection. In such situations, sound engineering practice will be the standard on which FEMA will base its determinations. FEMA will also provide the rationale for requiring this additional information.

- **Operation plans and criteria**: The operational criteria must be as described. All closure devices or mechanical systems for internal drainage, whether manual or automatic, must be operated in accordance with an officially adopted operation manual. All operations must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP.

- **Maintenance plans and criteria**: The maintenance criteria must be as described. Levee systems must be maintained in accordance with an officially adopted maintenance plan, and a copy of this plan must be provided to FEMA. This plan must document the formal procedure that ensures that the stability, height, and overall integrity of the levee and its associated structures and systems are maintained.

### 8.1.2. Development of Request for LOMR Package

For this scope of work, the CONSULTANT assumes that USACE is unable to provide a Letter of Certification, and that the CONSULTANT will work directly with FEMA to provide certification. Such certification would consist of a statement from a registered professional engineer that the works are designed in accordance with sound engineering practices to provide protection from the base flood. Per FEMA regulations, certification does not constitute a warranty or guarantee of performance, expressed or implied.
CONSULTANT will prepare a request for a LOMR, which will be reviewed by FEMA's contractor in Washington D.C. (Michael Baker). The request package will contain the FEMA application form along with information from previous analyses that address the following:

- Freeboard
- Closures
- Embankment protection
- Embankment and foundation stability
- Settlement
- Interior drainage
- Other design criteria
- Operation plans and criteria
- Maintenance plans and criteria

**Deliverables:**

- A letter from a registered professional engineer that states the completed levee repairs that are part of the contract work have been designed in accordance with sound engineering practices to provide protection from the base flood.

- An application package to FEMA for a LOMR, including a completed application form along with supporting information from previous analyses. (2 copies).

**Assumptions:**

- Portions of RD No. 784 (i.e., the area protected by levees repaired as part of this project) have been remapped by FEMA as being within the 100-year floodplain, and a request for a LOMR from FEMA is appropriate.

- The application to FEMA for a LOMR will be only for the portions of RD No. 784 levees that are part of the CONSULTANT's project (including the Bear River north levee from the WPIC to the setback levee, the WPIC west levee, and the Yuba River south levee from SR 70 to the Gold Fields).

- The analyses needed for the FEMA application package have already been completed by the CONSULTANT and others. No additional analyses are required.

- TRLIA will provide reports and information prepared by others needed for the application package, including field explorations, engineering analyses and operations and maintenance plans.
A draft application will be submitted to FEMA, for review. FEMA comments will be reviewed and a final application will be submitted.

8.1.3. Geotechnical Support for LOMR Package

Provide geotechnical support for preparation of LOMR application including copies of relevant geotechnical documents and an executive summary of CONSULTANT's investigation, design, and construction reports as needed.

Deliverables:

- A letter from a registered professional geotechnical engineer that states the geotechnical components of the completed levee repairs that are part of the contract work have been designed in accordance with sound engineering practices to provide protection from the base flood.

- Supporting geotechnical information from previous analyses for the application package to FEMA for a LOMR. (2 copies).

Assumptions:

- A draft application will be submitted to FEMA, for review. FEMA comments will be reviewed and a final application will be submitted.
Part D - Construction Management for Phase 4 Levee Repairs

Task 9. - Phase 4 Construction Management (SPRR to Simpson Lane)

CONSULTANT will provide Construction Management services during the construction phase of the Phase 4 Yuba River levee improvements from SPRR to Simpson Lane. The construction management team will administer the construction contract established between TRLIA and the Contractor and will provide Quality Assurance services.

Assumptions:

- It is assumed that the 2006 construction period will be August 7 through November 1. Part time construction inspection would occur November 1 through November 30.

- It is assumed that all levee improvements will be completed under one construction contract.

9.1. Communications and Correspondence

CONSULTANT will be the communication hub for the project. All communication and correspondence from and to the Contractor, TRLIA and CONSULTANT’s subconsultants will go through CONSULTANT’s construction management team. This duty involves processing and controlling large volumes of paperwork.

Deliverables:

- Correspondence, RFI and Submittal Logs.

Assumptions:

- One document controller will be needed for the duration of the project. CONSULTANT will use Project Tracker, CONSULTANT’s in-house developed document tracking software program, to log and track project paperwork.

9.2. Contract Administration

CONSULTANT will provide a Construction Manager and Resident Engineer for the construction period. The Resident Engineer will be on site full time for the duration of the construction period. The Construction Manager and Resident Engineer will be responsible for contract administration, which includes the following:

- Serving as the coordinator and facilitator between the primary parties involved in the contract,

- Processing submittals,

- Reviewing the construction schedule and monitoring progress,
- Processing progress payments,
- Using proper procedures to help avoid and resolve disputes,
- Helping to resolve potential claims,
- Negotiating and processing contract changes.

**Deliverables:**
- Daily Reports
- Monthly Status Reports.

**Assumptions:**
- One resident engineer will be needed for day to day contract management for duration of the construction period. One part time construction manager will be needed for claims mitigation and change order negotiations for the duration of the construction period.
- Phase 4 construction work for the Yuba River levee consists of a slurry wall from SPRR through Simpson Lane, repair of Simpson Lane in the area of the slurry wall, and levee raises where necessary. Work may also include a small land side seepage berm adjacent to the SPRR, pending geotechnical consultant analysis. Work is to be completed by November 1, 2006.
- TRLIA (via Contractor) will provide trailer, computers, office furniture, fax machine, copier, trailer, maintenance, restrooms in trailer, janitorial service, and supplies and utilities.

**9.3. Quality Assurance Inspection and Testing**
CONSULTANT will inspect and test to verify that the project is constructed in accordance with the requirements of the Contract. CONSULTANT will strive for the highest quality attainable within Project limitations. CONSULTANT will check materials brought on site for compliance with the Contract and approved submittals. CONSULTANT will check construction for proper location, dimension, elevation, and proper construction techniques. CONSULTANT'S geotechnical subconsultant will provide quality assurance testing of construction activities related to slurry wall construction and levee earthwork.

**Deliverables:**
- Daily reports.
- Test results.
- Photodocumentation.
Assumptions:
- Two full time inspectors and one part time inspector will be needed for the duration of the 2006 construction period.

9.4. Final Completion/Project Closeout
CONSULTANT will obtain warranties, guarantees, and record drawings; develop a punch list; verify lien releases; and process the last progress payment and final payment.

Deliverables:
Final Payment Forms Processed.

9.5. Other Geotechnical Quality Assurance Testing and Inspection
CONSULTANT will provide construction quality assurance for the 2006 season from August 1 to November 1. This task includes on-site observation and testing, laboratory testing, engineering oversight, and final QA report for the following:
- Slurry cutoff wall,
- Transition seepage berm.

Our budget assumes one technician can perform observation and testing. The following services will be provided:
- 65 technician days at 12 hours per day. (Note that hourly rate in fee proposal is based on average of 40 regular and 20 overtime hours per week.)
- Project Engineer at 1 hour per day
- Senior engineer at 2 hours per week
- Principal engineer at 2 hours per month
Laboratory testing:

- 42 ASTM 1557 Compaction curves
- 42 Plasticity Index
- 42 Sieve analysis
- 42 Moisture content
- 28 Unconfined compression
- 28 Permeabilities

Deliverables:

- Daily reports.
- Test results.
- Final Summary Letter Report.

9.6. Environmental
9.6.1. Environmental Construction Support Services

CONSULTANT will provide environmental monitoring during construction of the Yuba River Levee Repair Project (Phase 4), from SPRR to Simpson Lane, for TRLIA. The primary responsibility will be monitoring the implementation of the construction project and associated conservation and mitigation measures to ensure compliance with the conditions in the state and federal permits, as well as other tasks as described below. This scope of work is based on known and assumed conditions of the various permits and authorizations applicable to the project, including the mitigation monitoring plan required under the California Environmental Quality Act (CEQA) document. The following key assumptions govern this scope and associated fee.

- The construction season will extend from NTP through October 31, 2006.
- Environmental monitoring for this phase of Yuba does not require a full-time, dedicated, on-site monitor during construction.
- Jones & Stokes monitor(s) will possess the requisite skills and certifications in accordance with the permit and authorization conditions.
- TRLIA/Contractor will provide desk space for the monitor at an on-site facility.
- No cultural resource monitoring is required.
CONSULTANT assumes a protocol that all communication is to be through the construction manager.

CONSULTANT will provide a monitor that will be onsite as needed, but not full-time concurrent with construction. Services to be provided under this task include the following subtasks.

9.6.1.1. Environmental Awareness Training

CONSULTANT will provide an environmental training program for all construction personnel prior to the start of construction activities and as new crews are introduced to the project. The monitor will implement and report the results of this program. The program will educate workers about special-status species and waters of the U.S. present on and adjacent to the site and also about the regulations and penalties for unmitigated impacts on these sensitive resources.

Construction personnel will be required to attend environmental awareness training before working on any construction related activities. The training will include preparing and providing training materials (e.g., printed pamphlets). The monitor will be available to provide training to construction crews working in sensitive resource areas, on an as-needed basis (such as tailgate sessions).

9.6.1.2. Identify and Stake the Location of Sensitive Resources

CONSULTANT will identify and monitor the location of elderberry shrubs, wetlands, riparian habitat, SRA cover, and other sensitive resources to be preserved. Protective fencing will be installed around all sensitive resources. Erosion-control fencing will also be placed at the edges of construction where the construction activities are upslope of wetlands and stream channels to prevent washing of sediments offsite. The contractor will be responsible for installing and maintaining protective/erosion-control fencing. The boundaries of environmentally sensitive areas will be determined, and erosion-control fencing will be installed, before any construction activities begin and will be maintained throughout the construction period.

The monitor will ensure the avoidance of all sensitive habitat areas, including adjacent wetlands. The protective/erosion-control fencing will be surveyed by the monitor each day of the construction period. The monitor will notify the contractor if repairs are required.

9.6.1.3. Implement Elderberry Shrub Protection

The monitor will identify and monitor the location of elderberry shrubs prior to construction. The monitor will also identify the buffer zone around each elderberry shrub (i.e., 20-foot buffer, where feasible) using grade stakes. The construction contractor will be responsible installing orange construction barrier fencing around each elderberry shrub. The monitor will be responsible for monitoring the condition of the fencing and will notify the contractor if repairs are required.

9.6.1.4. Perform Weekly Wildlife Surveys in the Construction Areas

A CONSULTANT monitor will be responsible for conducting weekly wildlife surveys and monitoring construction in habitat for sensitive species. Weekly surveys will include walking and/or driving the project alignment in which construction is occurring. Wildlife occurring within the construction zone will
be relocated to an undisturbed area adjacent to the project. All work in the immediate area shall cease until the animals can be relocated.

9.6.1.5. Perform Terrestrial Clearance Surveys

CONSULTANT will also conduct preconstruction clearance surveys. Suitable habitat up to 200 feet will be surveyed for the presence of special-status species. If special-status species are located in the project area, the location will be recorded on field forms and a GPS location will be taken.

9.6.1.6. Attend Meetings and Coordinate with Project Team

CONSULTANT will attend meetings with HDR, the contractor, TRLIA, and other parties as necessary in support of the compliance activities. The monitor will also provide daily assistance with various other resource/regulatory tasks and attend required meetings with, or on behalf of, TRLIA as a liaison with the resource and regulatory agencies. This task includes weekly progress meetings and monthly management meetings.

9.6.1.7. Prepare Construction Monitoring Reports

CONSULTANT will prepare field forms to record monitoring activities, field inspections, project changes, and non-compliance events. The monitor will maintain daily logs, prepare weekly monitoring reports, and compile monthly monitoring reports that summarize the monitoring efforts, including any special-status species encountered, areas monitored, types of construction activities monitored, any non-compliance events, and corrective action taken, to be submitted to various resource agencies, as required by the environmental permits.

9.6.2. Prepare Yuba Phase IV Streambed Alteration Agreement Application

CONSULTANT will prepare and submit an application to the California Department of Fish and Game for the Yuba Phase IV activities. The application will be prepared according to new guidelines under Section 1600 of the California Fish and Game Code. CONSULTANT will be responsible for the filing fee, reimbursable by TRLIA.

9.6.3. Prepare Technical Addendum for Bear River Berm Extension

CONSULTANT will prepare a California Environmental Quality Act document to cover the additional work required near State Route 70 on the Bear River. This work is anticipated to include an additional landside seepage upstream and downstream of the highway bridge. The document will be developed as a technical addendum to the certified environmental impact report for the Bear/WPIC project.

9.7. Post-Construction Check Surveys

CONSULTANT will provide various surveying services as part of the Construction Management task, as described in the following sections.
9.7.1. Check Surveys

CONSULTANT will provide surveying services after construction is completed to verify that the surface as constructed meets the design grade. This surveying will cover approximately 7100 linear feet of project length, including approximately 200 feet along the axis of Simpson Lane. Initial field operations will establish horizontal reference points and vertical control benchmarks on centerline stationing of the levee. Verification of the final grade will be accomplished by ground surveys to establish a 3-D surface, complete with cross-sections at 100-foot intervals. Final grade at Simpson Lane will be determined similarly, with cross-sections at 25-foot intervals.

The project control survey will recover or re-establish horizontal and vertical control monuments based upon NAD 83, 1986 epoch and 1929 sea level datum established by the U.S. Army Corps of Engineers Survey 03-25F dated October 1, 2003. All control surveys will be supported by field notes, record documents and electronic drawing files in ACAD 2004 or newer format.

9.7.2. Surveying Support

Throughout the course of the Phase 2 and Phase 4 projects, additional surveying has repeatedly been required for specifics of the project not included or anticipated in the original scope. Therefore, during the Phase 4 construction period, CONSULTANT will provide services by a surveying crew, on an as-needed basis. This anticipated effort is estimated to be equivalent to that of 2 survey crew members for three, eight-hour days, and one eight-hour day for an associate surveyor.
### SCHEDULE FOR PERFORMANCE

Table 3. Schedule of completion

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part A - Phase 4 Levee Repairs, Upper Yuba River</strong></td>
<td></td>
</tr>
<tr>
<td>Task 2 - Yuba River Levee Pre-design</td>
<td>242 days after Kickoff Meeting</td>
</tr>
<tr>
<td>Task 4 - Plans, Specifications &amp; Estimates</td>
<td>395 days after Kickoff Meeting</td>
</tr>
<tr>
<td>Task 6 - Pre-Bid Assistance and Construction Support (Phase 4)</td>
<td>Per bid and construction sched</td>
</tr>
<tr>
<td>Task 7 - Construction Management (Phase 2 Bear River, WPIC and Yuba River Levees Repairs in 2006)</td>
<td>Per bid and construction sched</td>
</tr>
<tr>
<td>Task 8 - FEMA Certification for Contract Work</td>
<td>120 days after completion of Phase 4 Construction (2007)</td>
</tr>
<tr>
<td>Task 9 - Construction Management (Phase 4 Yuba Levee Repairs from SPRR to Simpson Lane)</td>
<td>Per bid and construction sched</td>
</tr>
</tbody>
</table>

Notes:
- Survey mapping information by others to be supplied NLT March 1, 2006.

Services Provided By Others:
- Base mapping and field surveys (levee cross sections, property lines, utility locations). Mapping and survey data will be provided to CONSULTANT in hard copy and digital formats.
- Preparation of plats and legal descriptions.
- Appraisals, negotiations with property owners, and acquisitions.
FEES AND PAYMENTS

Payment for all engineering services performed by CONSULTANT shall be on a time and materials basis as described by the terms of this Scope of Services. Payments made by TRLIA to CONSULTANT for engineering services shall be full compensation for all personnel, materials, supplies, and equipment used by CONSULTANT to complete the work.

CONSULTANT has prepared an amended cost breakdown shown below. The cost for Basic Services (Tasks 1 through 9) is increased by $280,000 over the current contract amount. Our current price ceiling is $3,537,835. With this amendment, the price ceiling would be increased by $280,000 to $3,817,835.

Table 4. Not to Exceed Total

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Contract Fee</th>
<th>Amendment 4 Fee</th>
<th>Total Contract Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1 - Project Management</td>
<td>$273,885</td>
<td>$273,885</td>
<td>$273,885</td>
</tr>
<tr>
<td>Task 2 – Yuba River Levee Pre-design</td>
<td>$153,552</td>
<td>$153,552</td>
<td>$153,552</td>
</tr>
<tr>
<td>Task 3 – Environmental Compliance and Permits</td>
<td>$308,799</td>
<td>$308,799</td>
<td>$308,799</td>
</tr>
<tr>
<td>Task 4 – Plans, Specifications &amp; Estimates</td>
<td>$361,632</td>
<td>$361,632</td>
<td>$361,632</td>
</tr>
<tr>
<td>Task 5 – Rights-of-Way, Easement Requirements, and Utility Coordination</td>
<td>$56,051</td>
<td>$56,051</td>
<td>$56,051</td>
</tr>
<tr>
<td>Task 6 - Pre-Bid Assistance and Construction Support (Phase 4)</td>
<td>$140,120</td>
<td>$140,120</td>
<td>$140,120</td>
</tr>
<tr>
<td>Task 7 - Construction Management (Phase 2 Bear, WPIC and Yuba River Levees Repairs in 2006)</td>
<td>$1,435,474</td>
<td>$1,435,474</td>
<td>$1,435,474</td>
</tr>
<tr>
<td>Task 8 - FEMA Certification for Contract Work</td>
<td>$147,129</td>
<td>$147,129</td>
<td>$147,129</td>
</tr>
<tr>
<td>Task 9 – Phase 4 Construction Management (SPRR to Simpson Lane)</td>
<td>$661,193</td>
<td>$280,000</td>
<td>$941,193</td>
</tr>
<tr>
<td>Total - Basic Services (Tasks 1-9)</td>
<td>$280,000</td>
<td>$3,817,835</td>
<td>$3,817,835</td>
</tr>
</tbody>
</table>
HDR ENGINEERING, INC.

STANDARD RATE SCHEDULE
January to December 2007

Project Principal 240
Senior Technical Specialist 225
Senior Project Manager 215
Senior Civil Engineer 215
Senior Electrical Engineer 207
Project Manager 180
Technical Specialist 163
Senior Mechanical Engineer 172
Senior Structural Engineer 171
Mechanical Engineer 150
Senior Project Engineer 136
Project Engineer 128
Electrical Engineer 117
Staff Engineer 111
Senior CAD Technician 110
Structural Engineer 108
Senior Electrical Technician 104
Senior Project Controller 99
CAD Technician 95
Senior Administrative 89
Engineer-in-Training 85
Project Controller 77
Drafter 71
Administrative/Word Processor 66
Clerical 56

Please Note: Rates include current overhead rate plus profit.

EXPENSES

In-House Expenses
Technology Charge per Direct Labor Hour $3.70
Vehicle Mileage (per mile) $0.485
Color Copy (per copy) $0.75
Photocopies (per copy) $0.10

Please Note: Technology charges include computer, CADD, network, software, and other related technology services.

Plotting (cost depends on size of plot)

<table>
<thead>
<tr>
<th>Material</th>
<th>Black and White</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond</td>
<td>$0.80 to $3.50</td>
<td>$10.50 to $20.25</td>
</tr>
<tr>
<td>Vellum</td>
<td>$1.60 to $9.65</td>
<td>$12.50 to $24.75</td>
</tr>
<tr>
<td>Mylar</td>
<td>$2.50 to $14.85</td>
<td>$15.00 to $29.25</td>
</tr>
</tbody>
</table>

Please Note: Expenses and subconsultants are charged with a 10 percent markup.
FOURTH AMENDMENT
TO
AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY
AND
HDR ENGINEERING, INC.

THIS FOURTH AMENDATORY AGREEMENT is made and entered into this ____ day of
October 2007, by and between the Three Rivers Levee Improvement Authority, (“TRLIA”), a
California Joint Powers Authority, and

HDR Engineering, Inc.
“CONSULTANT”

WHEREAS, TRLIA and CONSULTANT entered into an agreement on December 13, 2005 to
provide professional services for Engineering Design and Environmental Studies for Phase 4
Levee Repairs - Upper Yuba River, Continuation of Phase 2 Construction Management (2006),
and FEMA Certification of Contract Work (“Agreement”);

WHEREAS, a FIRST AMENDATORY AGREEMENT, executed February 14, 2006, increased
the maximum not to exceed contract fee from $2,580,038 by $118,955 to $2,698,993; and

WHEREAS, a SECOND AMENDATORY AGREEMENT, executed March 7, 2006, increased
the maximum not to exceed contract fee from $2,698,993 by $117,649 to $2,816,642; and

WHEREAS, a THIRD AMENDATORY AGREEMENT, executed August 8, 2006, increased the
maximum not to exceed contract fee from $2,816,642 by $661,193 to $3,537,835; and

WHEREAS, TRLIA and CONSULTANT desire to amend Agreement;

NOW, THEREFORE, TRLIA and CONSULTANT agree as follows:

1. Exhibit A of AGREEMENT shall be amended to perform those additional services as
described in Exhibit A to this FOURTH AMENDMENT.

2. Attachment B, Provision B.1 of the Agreement shall be revised to increase the maximum not
to exceed contract fee by $280,000 from $3,537,835 to

$3,817,835
All other terms and conditions contained in AGREEMENT shall remain in full force and effect.

This Amended agreement is hereby executed on this _____ day of October, 2007.

"TRLIA"                                                                 "CONSULTANT"

_________________________               ___________________________
Chairman                                  Randy P. Olsen
                                          Vice President

ATTEST:
DONNA STOTTLEMEYER
CLERK OF THE BOARD

_________________________
APPROVED AS TO FORM:

SCOTT L. SHAPIRO
GENERAL COUNSEL
September 27, 2007

Mr. Paul G. Brunner, P.E.
Executive Director
Three Rivers Levee Improvement Authority
1114 Yuba Street, Suite 218
Marysville, CA 95901

RE: Amendment No. 4: Additional Services; Phase 4 Contract dated December 13, 2005 - Upper Yuba River Levee Repairs, Continuation of Phase 2 Construction Management (2006), and FEMA Certification of Contract Work

Dear Mr. Brunner:


The purpose of this letter is to request a modification to our contract for additional services HDR performed to complete the TRLIA Phase 2 and Phase 4 design and construction management. The following items were accomplished and considered out of scope:

- Additional Construction management services for the Phase 2 Bear River, WPIC, and Yuba River Levee Repair and the Phase 4 Yuba River levee repairs.
  - The original schedule for the Phase 2 construction was from July 2005 to November 2005. The schedule was extended through June 2007 to complete all construction. Additional inspection was requested by TRLIA during the winter of 2005/2006 and 2006/2007 to ensure levee stability and safety. The additional fee for the extended schedule is $75,000.
  - Kleinfelder provided additional laboratory sampling for levee fill materials after the borrow source was exhausted. This included sampling from the Bear River Remnant levee, and several stockpile areas off site. Additional concrete samples were taken due to the increase in size of Pump Station #6. Additional permeability samples were taken from the 2 slurry walls placed in the Western Pacific Interceptor Canal (WPIC) to meet the contract specifications the USACE requested. The fee for this additional sampling/laboratory sampling is $75,000.
  - The Phase 4 construction schedule was originally scheduled from August 2007 to November 2007. Due to a late start, TRLIA requested that construction occur 24 hours a day, 7 days a week. Additional inspection was performed throughout the winter of 2006/2007 as directed by TRLIA. The fee for the additional night shift and winter inspection is $155,000.
  - Kleinfelder provided additional inspectors for the night shift of the Phase 4 Yuba River slurry cutoff wall. The fee for the additional night shift is $125,279.
  - Additional permeability samples were taken from the slurry wall placed in Yuba River levee to meet the contract specifications the USACE requested. The fee for this additional sampling/laboratory sampling is $59,234.

2365 Iron Point Road, Suite 300
Folsom, CA 95630
Phone (916) 817-4700
Fax (916) 817-4747
www.hdinc.com
• Additional Design Services.
  
  o Caltrans Maintenance Yard detention pond – Yuba River Seepage Berm. After the final design drawings were released to the contractor for the Phase 2 Yuba River Seepage Berm, Caltrans would not allow the contractor onsite until their stormwater runoff was contained. HDR designed a new detention basin for the Caltrans Maintenance Yard. The fee for this design is $42,000.

  o During the construction of the Phase 2 project, the USACE requested that seepage berms along the Bear River landside toe be designed and constructed. The fee for this design is $8,080.

  o During the winter of 2005/2006, a possible pin boil was located along the landside of the Western Pacific Interceptor Canal (WPIC). The USACE requested a monitoring well be installed to monitor potential underseepage. The USACE also requested 2 monitoring wells to be installed at the small seepage berm located along the Yuba River between the levee and the railroad tracks and 6 monitoring wells along the Yuba River near the newly constructed slurry cutoff wall. The fee for this design is $9,820.

• Construction Documentation Report.
  
  o The USACE requested a construction documentation report that included statistical analysis of both quality assurance and quality control data, discussions of changes between the design and construction, as-built drawings, and explanations of data that exceeded design parameters. HDR produced a draft, final draft, and a final version of this report. The fee to complete this report is $65,000.

The total fee for the above changes is $614,413.

Due to the uncertainty of the remainder of the Yuba Levee Phase 4 Project (Goldfields) based on the USACE re-evaluation of the hydraulic modeling, HDR is proposing the following:

1. Delete Part 2 – Remaining Yuba Levee Repairs from Task 2, Task 4, Task 5 and Task 6. Scope will be reduced but the fee will remain to cover the additional scope items as described above. The attached scope dated September 27, 2007 shows these items as lined out.

2. Increase the budget of Task 9, Construction Management, to cover Kleinfelder’s overages ($259,513) and HDR’s continued construction support to TRLIA ($20,487) for a total of $280,000.

3. Once the hydraulic modeling has been determined for the Yuba Levee Phase 4 Project (Goldfields), HDR will re-scope and budget to complete the remainder of the project.

The following table lists the contract fee and the Amendment 4 fee.
This modification would increase the contract not-to-exceed amount by **$280,000** to cover the additional services. The current contract not-to-exceed amount is **$3,537,835**. With this amendment, the price ceiling would be increased by **$280,000** to **$3,817,835**.

If you have any questions please call Mr. Blake Johnson at (916) 817-4879.

Sincerely,

Randy Olsen
Vice President

Blake Johnson, P.E.
Project Manager

Attachments
October 16, 2007

TO: Three Rivers Levee Improvement Authority Board
FROM: Paul Brunner, Executive Director
       Brian Boxer, Environmental Manager

SUBJECT: PBS&J/EIP ASSOCIATES, Contract Amendment 4

**Recommended Action:** Approve a fourth contract amendment with PBS&J/EIP Associates to continue environmental consulting services for the TRLIA program and authorize the TRLIA Chairman to sign once General Counsel has reviewed. The amount of this amendment is $385,810, for the time period of October 1, 2007 through November 30, 2008.

**Background:** TRLIA executed a contract with EIP Associates, a Division of PBS&J, (now PBS&J Inc.) on February 7, 2006 for Environmental Project Management Services. Duties included in this contract included the oversight and management of the Bear River Levee Setback Project, the Feather River Levee Repair Project EIR, and the Yuba-Feather Flood Supplemental Control Project, supervision of all related project invoices and receipts for the Department of Fish and Game Proposition 13 funding mechanisms, and the management of TRLIA maintained environmental escrow accounts. The contract has been extended/amended twice previously to perform these duties. The current contract, in the not-to-exceed amount of $285,000 is set to expire on December 31, 2007.

**Discussion:** In addition to the aforementioned areas of responsibility, this contract has come to require coordination and execution of all environmental permits associated with construction and levee repair, and the development of conservation easements between affected parties. Additionally, the scope of work (see Attachment 1) for this contract includes tasks associated with the environmental management of the DWR Proposition 1E TRLIA award and the DFG Proposition 13 TRLIA award, as well as environmental management and permitting services associated with the Yuba River and Feather River confluences (see Attachment 2).

Based on these acquired areas of responsibility and the on-going need for such services provided and fulfilled by this contract, there is a need to extend the existing contract as well as increase the allotted funding for it through November 2008. The requested extension/amendment increases the contract for Environmental Project Management Services to a not-to-exceed amount of $670,810.

**Fiscal Impact:** The amendment is for services on a time-and-material basis. The FY 07/08 portion of this proposed amendment is within the projected FY 07/08 budget for TRLIA construction management.
FOURTH AMENDMENT
TO
AGREEMENT BETWEEN
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY
AND
PBS&J

THIS FOURTH AMENDATORY AGREEMENT is made and entered into this ___ day of October, 2007, by and between THREE RIVERS LEVEE IMPROVEMENT AUTHORITY, a Joint Powers Authority, ("AUTHORITY") and PBS&J Inc., ("CONTRACTOR").

RECITALS:

WHEREAS, the AUTHORITY and the CONTRACTOR entered into an agreement to provide Environmental Project Management Services dated February 7, 2006 ("AGREEMENT");

WHEREAS, Article 16 of the AGREEMENT states that modifications or amendments to the terms of the AGREEMENT shall be in writing and executed by both parties;

WHEREAS, the AUTHORITY and CONTRACTOR desire to amend the AGREEMENT;

NOW, THEREFORE, the AUTHORITY and CONTRACTOR agree as follows:

1. Article 2 of the AGREEMENT shall be revised to extend the termination date from December 31, 2007 to November 30, 2008.

2. Attachment B, Article B-1 shall be revised to change the maximum not to exceed from One Hundred Thousand Dollars ($285,000) to Six Hundred Seventy Thousand Eight Hundred and Ten Dollars ($670,810)

All other terms and conditions contained in the Agreement shall remain in full force and effect.

This AMENDED AGREEMENT is hereby executed on the ________ day of October, 2007.

AUTHORITY

By: __________________________
"THREE RIVERS LEVEE IMPROVEMENT AUTHORITY"

CONTRACTOR

By: __________________________
"PBS&J Inc."

APPROVED AS TO FORM:

__________________________
SCOTT SHAPIRO
THREE RIVERS LEVEE IMPROVEMENT AUTHORITY COUNSEL
The purpose of the continuing environmental permitting management services will be to:

- Coordinate and manage the efforts of TRLIA's current consultant team related to environmental documentation and permitting processes;
- Review administrative draft documents;
- Provide strategic environmental permitting guidance to TRLIA and the consultant teams; and
- Represent TRLIA in negotiation with regulatory agencies, as appropriate.

In undertaking this assignment, PBS&J will report directly to the TRLIA Executive Director and will provide the following services.

**Task 1.0 Project Environmental Team Management and Coordination**

PBS&J will provide services to manage and coordinate the activities of the TRLIA environmental consultant team. These services may include, but may not be limited to, the following tasks:

- Participation in weekly team management meetings;
- Participation in monthly contractor meetings;
- Conduct of weekly (or as appropriate) environmental team management meetings;
- Maintenance of a project task tracking sheet;
- Provision of regular briefings to the Executive Director;
- Attendance at TRLIA Board meetings, as appropriate;
- Review and comment on draft documents prepared by the TRLIA environmental consultant teams;
- Review and comment on environmental documents associated with TRLIA activities;
- Coordination of mitigation strategies and related agency negotiations; or
- Representation of TRLIA in regulatory agency meetings, as appropriate.
Task 2.0 Environmental Management for DFG Proposition 13 Award

PBS&J will provide services for continued management of the Department of Fish and Game’s Proposition 13 award to TRL1A. These services include the following tasks:

- Completion of 2008 Grant Award Application;
- Invoicing responsibilities for remainder of DFG 07 Grant and DFG 08 Grant;
- DFG and other agency coordination

Task 3.0 Environmental Support for DWR Proposition 1E Award

PBS&J will provide services to manage environmental revenue and cash flow related to the TRL1A 07 award of Proposition 1E funds. These services include, but may not be limited to, the following tasks:

- Coordination of restoration strategies between land owners, DWR, and TRL1A;
- Participation in regular management meetings between DWR and TRL1A;
- Development, design, and coordination for restoration area within the Feather Setback;
- Development of active and passive agricultural practices for incorporation with the Feather Setback restoration site;
- Actively pursue environmental Federal funding opportunities within Congress for the YCWA Basin Plan

Task 4.0 Development of Conservation Easement for Bear and Feather Setback Restoration Areas

PBS&J will provide services for continued development of the Bear River Setback restoration area conservation easement and for the upcoming Feather Setback restoration area. These services include, but may not be limited to, the following tasks:

- Agency and landowner partner coordination;
- Document preparation;
- Coordination with Yuba County, RD 784, and property rights consultants for legal land transfer;
- Ensure environmental compliance on sites until legal transfer

Task 5.0 Environmental Escrow Account Management

PBS&J will provide continuing services for the management of TRL1A’s remaining environmental escrow account for vernal pool crustaceans. These services include the following tasks:

- Coordination between the USACoE and the US Fish and Wildlife Service for the partial disbursements of escrow;
- Coordination with US Bank and Yuba County to maintain an accurate and current escrow cash sheet;
- Escrow document preparation and transmission to and from TRL1A and US Bank
STAFFING

Mr. Brian D. Boxer, AICP, will continue to serve as Project Director and Anja A. Kelsey will continue to serve as the Environmental Permitting and Project Manager. As Environmental Permitting Manager, Anja A. Kelsey and/or Brian Boxer will represent TRI.A at meetings. As appropriate, PBS&J may occasionally use other PBS&J technical or support staff to provide supplementary technical or strategic information or to provide services more cost efficiently. These additional staff will not be used to undertake tasks currently assigned to the TRI.A environmental and/or engineering consultant teams.

BUDGET

EIP Associates will provide environmental permitting management services on a time and materials basis. It is currently estimated that the average level of effort for Anja A. Kelsey will be approximately 25 hours per week, although there may be periods that involve greater levels of document review and other periods of intense effort in order to maintain schedule may require additional effort. During 2007, Mr. Boxer's time will be billed at $220 per hour; if the contract extends beyond 2008 this rate will be subject to change. Anja A. Kelsey's time will be billed at $105 per hour; however this rate may be subject to change past 2007. Other PBS&J staff time will be billed consistent with the attached Schedule of Standard Billing Rates. Direct expenses incurred in the course of provision of the above described services will be billed based on actual receipts plus PBS&J's standard administrative fee, as identified on the Schedule of Standard Billing Rates.
# Hourly Billing Rates and Job Classifications

**Senior Division Manager/ Principal Technical Professional**  
$190–$260/hour

Senior Program Manager/ Senior Project Director/ Senior Planner IV/ Senior Scientist IV  
$175–$220/hour

Program Manager/ Senior Environmental Manager III/ Project Director/ Senior Planner III/ Senior Scientist III  
$150–$190/hour

Senior Environmental Manager/ Senior Planner II/ Senior Scientist II/ Senior Engineer II  
$120–$160/hour

Associate Environmental Manager/ Associate Planner/ Senior Scientist I  
$95–$125/hour

**Environmental Specialist / Planner II/ Scientist II**  
$85–$110/hour

**Environmental Analyst / Planner I/ Scientist I**  
$65–$90/hour

Senior Administrator  
$90–$120/hour

Senior Word Processor  
$75–$100/hour

Word Processor  
$65–$90/hour

Administrative  
$55–$80/hour

**Technical Aide I / Technical Intern**  
$45–$65/hour

**Mileage**  
$.485/mile

In addition, identifiable, non-salary costs that are directly attributable to the project (i.e., travel, meals, lodging, auto rentals, printing and copies, graphic materials, phone charges, equipment and specialized computer charges, etc.) and subcontractor fees include a 15% administration charge to cover overhead and administration.

1. This schedule is effective until January 1, 2008 and is subject to annual and/or periodic revisions thereafter, as necessary to accommodate inflationary trends, salary adjustments, and the general costs of business.

2. Invoices will be submitted by Consultant monthly. Client will notify Consultant, in writing, of any objections to an invoice within ten (10) days of the date of invoice. Otherwise, the invoice shall be deemed acceptable by the Client. Amounts indicated on invoices are due and payable immediately upon receipt.

3. A late payment finance charge at a rate of 18% per annum (or the maximum amount allowed per law if lower) will be applied to any unpaid balance commencing 30 days after the date of the original invoice.

4. Fees for litigation and expert witness services will be charged at $450.00 per hour with a 4-hour minimum per day.
<table>
<thead>
<tr>
<th>Job Classification</th>
<th>Project Manager</th>
<th>Associate Project Manager</th>
<th>Project Support</th>
<th>Hours Per Task</th>
<th>Cost Per Task</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brian Boxer</td>
<td>Anja Kelsey</td>
<td>Cotelle Benson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Task 1: Environmental Management**

- CEQA Document Oversight: 100, 500, 55
- Permits: 30, 400, 45
- Coordination Meetings: 50, 200, 260
- Management Meetings: 80, 160, 240

Task Subtotals: 280, 1260, $189,500

**Task 2: CDFG Proposition 13 Invoices**

- Contract Negotiation: 20, 100, 20
- Document Preparation: 9, 120, 400, 520
- CDFG Summary Reports: 0, 120, 80, 32
- Invoices: 6, 280, 12
- Agency Coordination: 1, 40, 80, 16

Task Subtotals: 35, 380, 860, $126,000

**Task 3: Conservation Easements**

- Meetings: 12, 100, 30
- Document Preparation: 30, 240, 45

Task Subtotals: 42, 400, $51,240

**Task 4: Environmental Escrow Accounts**

- Meetings: 3, 12, 22
- Document Coordination: 20, 16
- Document Preparation and Execution: 10, 21

Task Subtotals: 3, 42, $5,070

**Task 5: Miscellaneous and ODC's**

- Travel and Printing Expenses: $18,000

**Subtotal**

- Total Hours: 340, 2082, 540
- Hourly Rate: $220, $105, $90
- Total EIP Labor: $74,800, $218,810, $75,600, $385,610